Clinical Lectures ON SYPHILITIC DISEASE OF BONE.

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LECTURE I.

GENTLEMEN,—The notes of the following case have been carefully kept for me by my dresser, Mr. G. Shaw, and from them we may study some of the leading features of disease of the bones depending upon hereditary syphilis.

M. C——, aged eighteen, has resided all her life in London, and, so far as she can remember, has enjoyed good health up to the present time. She has in a marked degree the characteristic features of inherited syphilitic teeth; the bridge of her nose is broad and sunken; her forehead is large and protuberant over the frontal eminences; her skin of a dusky hue. Her intellectual powers are also imperfectly developed; she does not know her letters, and is childlike in her manner. She has clearly-defined mitral disease of the heart. From information received from a cousin, it is certain that M. C——'s father was suffering from the effects of syphilis before his marriage; her mother is still alive, but has only had one living child. The patient has been employed as a maid of all work in a small lodging-house; as a rule she has laboured hard for some sixteen hours every day, and been indifferently fed. She had been in her present situation a year and a half before coming into hospital.

Some twelve months ago our patient noticed what she described as a small swelling on the lower and outer side of her left leg, just above the ankle-joint. She cannot remember having received any injury to the part. For some time she took but little notice of it; the swelling, however, increased, and gradually assumed its present dimensions, causing her considerable pain, especially towards evening. About three months since she became quite lame from the above-mentioned cause, and applied for relief as an out-patient. She was ordered increasing doses of iodide of potassium; but as it was evident she required rest and food as well as medicine, she was taken into the hospital on the 14th June. There was then a clearly-defined enlargement of the lower end of the shaft of the left tibia and fibula, extending round the entire circumference of the bones for about an inch and a half above the ankle-joint. The swelling was most prominent a little above the joint, and reminded one very much of a condition not uncommonly met with in the horse, called "ring-bone"; the skin and soft tissue over the part were natural in appearance, although indurated. The ankle-joint was unaffected. There was no enlargement of any other bone in the body. On admission, the patient was much out of health. The pain in the affected limb was constant, and increased towards night; it was greatly aggravated by pressure applied over it. She was ordered to remain in bed; a properly adjusted splint was fixed to the leg and foot, so as, without pressure on the enlarged bones, to keep the parts absolutely at rest; the patient was put on full diet, and the iodide of potassium together with iron and quinine were administered.

It would be superfluous labour to attempt to follow out the details of this case. Suffice it to say that the patient was more or less constantly under our care until March, 1877. During this time she was sent into the country. Iodine having failed, she was put on a course of mercury; the actual cautery was used, Scott's dressing, and, in fact, everything we could think of, employed; still the enlargement of the bone remained, and the pain continued in spite of all we could do to relieve it; but I was unable to detect any disease of the ankle-joint. On my leaving London for a time in February, M. C—— passed under the care of one of my colleagues; and on the 27th March, finding effusion had occurred into the ankle, he inserted a full-sized drainage tube through the joint. On my resuming charge of the wards on the 12th April the patient was suffering from high fever, rigors, dry tongue, frequent purging, and profuse sweats—in fact, from septicæmia. The tube was removed, but there was a considerable discharge of matter from the wound. She continued to grow worse, and, after consulting with Mr. Cowell on the subject, it was determined to amputate the limb some three inches above the ankle-joint. The operation was accordingly performed on the 18th April, and from that time the patient rapidly recovered, and left the hospital before the end of May with a very good stump.

In this case we had certain evidence that our patient's father had secondary syphilis before the birth of his child; the condition of her incisor teeth, the expanded and sunken bridge of her nose, peculiar forehead, and imperfectly developed intellect, all point with unmistakable clearness to the fact of her having inherited the disease from which her father suffered. Doubtless, as an infant, she had had inflammation of the Schneiderian membrane, and probably blotchy and scaly rashes and other symptoms of syphilis; but these had passed away, and, as is common in instances of the kind, the child grew up to be a robust woman, and then the disease of the bone for which she came under our treatment appeared. Referring to a case we have lately seen, I shall on another occasion explain to you the circumstances of certain lesions that occur about the epiphyses of the bones of newly born syphilitic infants. But the affection we are now considering is developed in syphilitic subjects, as a rule, from their fifteenth to their thirtieth year. It usually commences as a slow enlargement of the ends of one or more of the long bones; but it may appear in the vertebræ, pelvis, or flat bones, such as the skull. The pain in the affected part is generally intermittent, increasing towards night. When in bed, starting of the affected limb is not an uncommon symptom. Neighbouring joints are very seldom implicated, unless in an advanced stage of the disease; its characteristic features being—gradually increasing swelling of one or more of the long bones, uncomplicated with joint affection or necrosis of bone. These inherited syphilitic affections of bone are not unfrequently met with about the upper end of the femur; but there, as in other localities, those parts of the bone which are not covered with periosteum remain free from disease; and so, although there may be considerable thickening of the femur about the trochanters, the head and neck of the bone remain healthy. The same fact is demonstrated by reference to the circumstances of this form of disease when it involves the extremities of the humerus or the bones near the knee and ankle joints, for those parts of the bone covered by synovial membrane or articular cartilage are never primarily implicated in the abnormal growth or disease which we are now considering. This remark applies to cartilage as well as bone. It is only when this structure is covered by perichondrium (a modified form of periosteum), such as we find in the cartilage composing the larynx, that syphilitic affections of this structure are met with. This fact, which is drawn from the clinical study of many instances of the kind, leads us to the conclusion that in by far the majority of these cases of syphilitic epiphysial disease, if not in all of them, the abnormal action commences in the periosteum surrounding the cancellated tissue of the extremities of the affected bones, and that the actual disease of the bone which sometimes occurs is a consequence of the primary affection of the periosteum. The course which most of these cases run points also to this conclusion, because the slowly enlarging painful extremity of the affected bone is unquestionably amenable to the influence of mercury. Under a judiciously administered course of this drug the disease gradually disappears, although it may have existed for months. But I know of no abnormal condition of the true osseous structure, or rather, I should say, medullary tissue, leading to enlargement of the bone, which is beneficially influenced by mercury or any other drug; nor do I think it possible, from the minute anatomy of the parts, that such would be the case; that is to say, we cannot imagine a syphilitic or any other form of inflammation which could run its course unchecked for a considerable time in the medullary structure of a bone, and then give way to treatment; for during the course of any such persistent action in this delicate structure, sclerosis or other changes in the bone would have occurred, from which the parts could hardly recover or regain their healthy functions

after a few weeks' treatment, as many instances of long-continued syphilitic disease certainly do.

But the question naturally arises, How was it that an amputation became necessary in a case of this kind? For if there is one fact more certain than another regarding these syphilitic cases it is that a mild mercurial course, and, above all, time and patience, will cure the disease. In reply to this question, in the instance of M. C——, it was necessary to remove the rotting parts from which her system was being infected, in order to save her life. No doubt the access of the impure air of our hospital-wards passing into the joint through the drainage-tube, had set up dangerous putrefactive changes in the part, which had then been absorbed into the system, and produced the diarrhœa and other symptoms of septic poisoning from which our patient was suffering before the operation. But the pyæmia was the immediate result of an injury, and not of the syphilitic disease; had the latter run its natural course it is probable, before an opening into the joint through the skin had occurred, that sclerosis of the extremities of the bone entering into the articulation would have formed a barrier to the absorption of matter through the cancellated tissue into the general circulation. I was averse to an excision of the joint in this case because, as a rule, among adults instances of excision of the ankle-joint, except in traumatic cases, do not make good recoveries, and most certainly not for the relief of septicæmia. Then, again, this patient being infected by inherited syphilis was a bad subject for a complicated operation of this kind. Syphilitic patients are, as a rule, unfavourable persons to operate on. And, lastly, the disease of the heart from which M. C—— suffered was of such a nature as to lead Mr. Beer, our chloroformist, to demur to giving anæsthetics, and to urge me to complete my operation as speedily as possible, so that our patient should not be under the influence of ether longer than was absolutely necessary. These considerations, and the fact that I was not sure if I could remove the entire disease by excising the joint, induced me to amputate the leg at its lower third.

Before the operation we might well have been under the impression that the patient was suffering from enlargement of the lower cancellated extremity of the bones of the leg, for there was evidently increase in the size of the bones in this situation, which was marked on comparing the left with the right leg. In the records of the case the expression the "enlargement" and "swollen" end of the tibia and fibula recurs over and over again, and had the case terminated favourably we might perhaps have supposed we had cured an instance of "inherited syphilitic osteitis"; but you now see how false our conclusion would have been, for on examining the diseased ends of these bones we find that their enlargement is not due to osteitis, but to the growth of a uniform layer of new bone outside the tela ossia of the original bones, that is, outside the layer of compact bone which was originally formed round the lower epiphyses. A sheath of bone has here grown from the periosteum, producing a condition similar to that seen in the provisional callus round the site of a fractured bone in one of the lower animals; and so here unquestionably we have an enlargement of the lower inch and a half of the tibia and fibula, not from changes occurring in its cancellated tissue, but from a periosteal growth, and this I believe to be the characteristic feature of syphilitic affections of the extremities of the long bones, whether inherited or otherwise, distinguishing them in a marked manner from the tuberculous disease of bone, which, as I have before explained to you, originates in alterations in the growth of the round cells contained in the medullary tissue. We noticed that in tuberculous disease of bone the indications afforded us by the thermometer were not to be relied on, but how different is this in cases of syphilitic diseases of bone. If we examine M. C——'s temperature-chart, we find that week after week the mercury in the thermometer showed that at night the temperature of her body invariably rose to 101° or 102°, and fell to 99° towards morning. Neither mercury nor iodide of potassium directly influenced this abnormal temperature, but twelve grains of quinine, with the eighth of a grain of extract of Calabar bean, invariably checked the rise of temperature for some days after it was administered.

Doubtless if this growth had increased in density and thickness, the bloodvessels passing through it to the cancellated tissue of the original bone would have been pressed upon and injured, and so the nutrition of the bone would have suffered, and in time might have been so defective that necrosis would have occurred, but not inflammation; and we might then have found the lower portion of the tibia dead and surrounded by new bone, produced, as above mentioned, from the periosteum. We see indications of the commencement of this process in sclerosis of the tela ossia within this periosteal growth, and also in this crescentic patch of necrosis which you observe at the lower end of the tibia, and which is remarkable as demonstrating in the osseous system the existence of the law which so often governs the extension of syphilitic ulceration of the soft parts, and which causes them to spread in a circular form.

In this case the contents of the cancellated tissue of the astragalus are not only perfectly healthy, so far as we can ascertain by the microscope, but its condition affords us a good illustration of the way in which new bone is formed from the medulla after an injury, showing that the normal functions as well as the structure of this delicate tissue have been unaffected to any great extent by the disease progressing in the tibia and fibula. On making sections through the astragalus we find its articular cartilage and the sub-cartilaginous layer of bone have entirely disappeared, their place being occupied by granulation-tissue which is supplied with vessels continuous with those in the cancellated tissue of the bone; beneath this soft layer of granulation-tissue there is a broad stratum or layer of newly-formed bone. The round cells of the medulla filling the original spaces in the cancellated tissue of the bone have become surrounded by a homogeneous material; they are in truth embedding themselves in a deposit of bone-earth. Had calcification progressed in this layer, we should have found a stratum of dense bare bone projecting into the joint; as sclerosis had advanced in this layer, the vessels supplying this granulation-tissue would evidently have been cut off, and so this soft vascular structure must have perished, leaving the newly-formed and denuded hard layer of bone beneath it; and this layer of bone having once formed in the manner I have described from the cells contained in the cancellated tissue, would not only have effectually prevented the absorption of matter from the joint through the cancellated structure into the blood, but also obstructed the medulla contained in the proximal ends of the tibia and astragalus meeting, and forming an anchylosis. In this instance I think the direction taken by the newly-produced layer of bone, or that parallel to the joint, leads to the conclusion that it had been formed in consequence of the changes induced by the atmosphere and drainage-tube introduced into that part; and this idea is strengthened by the fact that in this case, with the exception of the newly-formed layer of bone immediately beneath the original articular surface of the astragalus, the medulla throughout the astragalus was healthy. I mean, if this layer of newly-formed bone had resulted from constitutional causes, it is hardly probable that the abnormal action would only have manifested itself in the formation of a layer of bone such as I have described, whereas supposing it to have resulted from injury of the part we have a cause sufficient to account for the pathological changes noticed in this specimen. Part of this new subcartilaginous bone has become thoroughly organised, but the larger portion of it contains a number of the round cells, which are being imbedded in bone-earth, or, in other words, are undergoing transformation into lacunæ. After a time most of these cells would disappear, and it seems to me the description which we read of inflamed bone possessing numerous lacunæ produced by the proliferation of the bone corpuscles is, in fact, nothing more than a thin layer of the medullary structure in a stage of transformation into bone such as I have described, for it is hardly likely that the protoplasm of the original bone-cells can increase and multiply to any great extent after ossification has once been completed around them.

From the condition of the parts in this specimen we can also comprehend how it is that our treatment did not succeed in arresting the progress of the disease, for we find the layer of bone formed under the periosteum consists of hard, fully organised, osseous trabeculæ. Had the case come under our treatment in its early stages, or before ossification had been completed, it is more than probable either iodide of potassium or mercury would have effected

its removal; but under existing circumstances our drugs had no more influence over the growth than they would have had in causing the absorption of an exostosis, and this demonstrates to us the importance of treatment in the early stages of syphilitic affections of bone. The same remark applies to ordinary cases of syphilitic nodes; in fact, the abnormal ring of bone formed in this case is a node surrounding the lower end of the tibia and fibula. The reason why these periosteal growths appear mostly about the extremities of the long bones in cases of inherited syphilis is probably because in the growing bone the most active changes are going on in these particular localities; and, as I have before remarked, we see precisely analogous formations occur round the seat of ill-set fractures, increased action in both cases determining an augmented growth in the part.

CLINICAL REMARKS ON RHEUMATISM.

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(*Concluded from p. 530.*)

THE pathology of articular rheumatism is confessedly obscure and difficult. That the inflammation in the joints is not common inflammation, but due to the presence of some morbid material in the blood, is now pretty well recognised. What, then, is this morbid material? Is it introduced into the body from without, like the poison of small-pox or typhoid fever, or is it manufactured within the system like the poison of gout? Is it exhausted or used up for a while by an attack of rheumatism, as happens in gout, or is it always present, but requiring from time to time a fresh application of the exciting cause? These are not easy questions to answer.

It is curious that Dr. Maclagan was induced to try salicin as a remedy for rheumatic fever in consequence of a theory that the disease was malarious in its origin—a theory, however, that is scarcely borne out by the natural history of the disorder. The fact that acute rheumatism is in no sort of way either contagious or infectious; that the liability to it seems to be confined to a certain number of persons, many of whom have inherited their undesirable proclivity; and that cold is its chief, if not its only, exciting cause, seem to show that the elements of articular rheumatism exist in the system of those who are predisposed to the disorder, ready to start into activity upon the application of the necessary stimulus. According to this view, the pathology of rheumatic fever would resemble that of gout, and so it does to some extent. Both diseases may be inherited, both are liable to recur, there is a certain similarity in their symptoms, and each when left to itself comes to an end in a somewhat variable time. But here the resemblance ends. Articular rheumatism is a disease of early adult life, gout is most common after middle age. It is doubtful whether a predisposition to rheumatism can be acquired by vicious habits, improper food, or the abuse of wine and beer, important factors in the production of gout. Thanks to Dr. Garrod, the poison of gout has been clearly made out to be urate of soda in the blood, but up to the present time no examination of the blood, urine, or sweat, in cases of rheumatic fever, has given any clue as to the nature of its *materies morbi*. That it might be some acid seemed probable, and Dr. Prout suggested lactic acid. Dr. Richardson's experiments will, I dare say, be remembered. He injected a solution of lactic acid into the peritoneum of a cat and a dog, and after death in each case distinct endocarditis was found. My colleague, Dr. Silver, has expressed himself very clearly on this subject in a paper read before the Clinical Society on the use of veratrum viride in rheumatism. He says:—"It has been roundly asserted that the immediate cause of rheumatic fever is lactic acid—at all events, an acid of some kind. Were this so it would be folly to seek a remedy in veratrum viride or any other neurotic: neutralise the acid and the disease would cease. On this theory depends the alkaline treatment of rheumatism. Against its validity several weighty arguments may be adduced. In the first place, it has to be proved that life is possible with an acid blood. In the second, admitting a blood poison of an acid kind, its effects might be expected to be equally visible on both sides of the heart; but we know that the right, not differing from the left in intimate structure, is not attacked, while the left is so frequently. But it is especially in its application to practice that the theory fails us, for we may admit the alkaline treatment to be in a certain degree successful, and yet reject its supposed basis. Nay, did the theory and practice exactly coincide, it is plain that the disease should be arrested, except in so far as the pathological processes already set up were concerned, as soon as the blood resumed its normal alkalinity—that is, before the urine became alkaline. Yet it is a matter of experience that the disease may go on days and weeks after that event." (Trans. Clin. Soc. vol. iv., 1871.)

We are led to hope, in consequence of the *materies morbi* in gout having been detected, that one day we may ascertain something about the poison of rheumatism; but it must be remembered that we are still entirely ignorant of the morbid matter that exists in the blood in many diseases. No analyses, no investigations, have led to the discovery of what causes small-pox, measles, or any disorder of the zymotic class; nor are we able to isolate the subtle marsh poison that produces remittent and intermittent fevers. All we know of them is from their effects upon the human body, and it may be this is all we shall ever know of rheumatic fever. Whatever the *materies morbi* of this disease may be, it is a very remarkable fact that it exists, or is ready to become active, only during a certain period of life; but of the reason for this we are quite ignorant. The drenching sweats, with their peculiar odour, suggest that the poison of rheumatism may be eliminated by the skin, and such a view is strengthened by the fact that the cessation of these sweats often precedes, and always accompanies, the unfavourable forms of the disease.

Post-mortem examination throws little or no light on the pathology of articular rheumatism. It is not often that we get an opportunity of investigating the condition of the joints during an attack of the disease. Every now and then, however, rheumatic fever proves fatal through the occurrence of severe cardiac mischief or hyperpyrexia, and then we find that the affected joints are more or less vascular, especially about the synovial fringes, and coated with a sticky, altered synovia. Sometimes there is some actual effusion, more often not, because the joint mischief is apt rapidly to subside upon the supervention of fatal complications. No ulceration of the cartilages takes place in true acute rheumatism, even after repeated attacks of the disease (Garrod). When death has been caused by heart disease, or any other complication, the post-mortem appearances will be in accordance.

In diagnosing articular rheumatism we may take into consideration the probabilities of the case as well as the actual symptoms. Thus, the age of the patient, a previous attack of rheumatism, a history of exposure to wet and cold, will help us to arrive at a conclusion. The symptoms of acute rheumatism may be mistaken for those of gout, of acute rheumatoid arthritis, of pyæmia, and of gonorrhœal rheumatism. With the exception of pyæmia, the constitutional symptoms of acute rheumatism are much more severe than in the other disorders. The copious sweats, with their peculiar odour, the number of joints affected at the same time, the tendency to metastases and heart disease, are all very characteristic of acute rheumatism, as is also the trivial injury to the affected joints, which are so damaged in pyæmia, and gonorrhœal and rheumatoid arthritis. The subacute and chronic forms of articular rheumatism somewhat resemble chronic gout, chronic rheumatoid arthritis, and other chronic joint affections; but a careful study of the disease with its history will generally clear up any doubt as to the nature of the attack.

Were it not for the liability to heart disease, with its present and future dangers, and the possible occurrence of hyperpyrexia, the prognosis in rheumatic fever would be very favourable. As it is, but few patients die of it directly, and none from the mere joint disease. But if the immediate perils of cardiac complication or high temperature are escaped, the former too frequently leaves permanent mischief, which subsequently proves fatal. The prognosis, therefore, in rheumatic fever must, of necessity, be guarded, not, indeed, with reference to its immediate, but to its remote,

effects. Heart disease is more liable to occur in children than in adults; hyperpyrexia in adults than in children. In the chronic forms of articular rheumatism the prognosis is most favourable.

The treatment of rheumatic fever has lately undergone a complete revolution, which has happily placed it on a much more satisfactory footing. But a short time ago, a tolerably severe case was pretty sure to last six or seven weeks, almost uninfluenced by the remedies employed. Some put their faith in quinine, some in alkalies, some in various drugs, and some did nothing, with much the same result; and Sir William Jenner himself, when president of the Clinical Society, spoke of the doubt and uncertainty with which he used to approach the treatment of articular rheumatism under the old *régime*. It has been claimed for the alkaline treatment that it diminished the liability to heart mischief; but about this I think there is some doubt. If, however, it is thought desirable to try it, thirty grains of the bicarbonate of potash may be given every four hours, with or without five grains of nitrate of potash, in some peppermint-water or any other suitable vehicle. The potash produces no disagreeable effects, and may be continued for any length of time. It always diminishes the acidity of the urine, and sometimes makes it neutral, or even alkaline. With this internal treatment, the affected joints may be kept wrapped up in lint soaked in an alkaline lotion (bicarbonate of soda, one ounce; distilled water, one pint), and covered first with oiled silk, and then flannel or cotton-wool. In all cases of rheumatic fever the bowels should be kept gently open, but it is needless and undesirable to purge for mere purging's sake. The diet should be light, consisting chiefly of slops. Stimulants are not necessary as a matter of course; and the patient must remain quietly in bed until such time as his disease takes its departure, which will vary, under this treatment, according to the severity of the symptoms or the tendency to relapse, from three to six or seven weeks, or even longer.

My late colleague, Dr. Hyde Salter, was in the habit of using quinine in the treatment of acute or subacute rheumatism, and I have had many opportunities of observing the result, which I cannot say impressed me at all favourably. Dr. Garrod combines the quinine and alkaline treatment, using a mixture made by rubbing up the quinine with the bicarbonate of potash, a little mucilage, and some aromatic tincture, in such proportions that each ounce and a half of the mixture contains five grains of quinine (in the form of carbonate) and thirty grains of bicarbonate of potash. This dose is given to an adult every four hours, and continued as long as may be deemed desirable. Dr. Garrod speaks favourably of this combination.

Of the treatment of rheumatic fever by bleeding, mercury, colchicum, antimony, it is unnecessary to say more than that modern experience has found such agents powerful only for evil. Iodide of potassium has been a good deal used, and though of but little service during the height of the disorder, it is often useful later on, helping us to "speed the going guest." Guaiacum is another drug which is sometimes successful in relieving the pain of the joints in the more chronic forms of articular rheumatism.

Reference must be made to the external modes of treating or assisting the treatment of rheumatic fever. Of these the chief are the hot-air bath, the application of alkaline lotion, cotton-wool, blisters, or iodine paint, to the inflamed joints. The hot-air bath has seemed, in some instances, to relieve pain, and its diaphoretic effects may be of service in eliminating the morbid material of the disease; but in a complaint like acute rheumatism, where the temperature is liable to range high, the application of external heat cannot be made without some risk, and the permanent benefit would appear to be doubtful. Besides which the excessive pain that attends any movement in the height of the disease would make it difficult, if not dangerous, to apply the remedy. The application of warmth to the affected joints is always grateful to the patient, and wrapping them up in cotton-wool or flannel generally alleviates the pain. The use of the alkaline lotion may prove beneficial, either in the same way or from some soothing influence connected with the alkali. Blisters and iodine paint are scarcely applicable during the acute stage of the disease, but are often of service subsequently by hastening the absorption of any fluid that may linger in the joints, and toning up the weakened parts. Blisters should be applied a little above the affected joint rather than over it; whilst iodine paint should be used cautiously, as, in certain persons, it produces such an inflammation of the skin as to amount almost to erysipelas.

Such, then, was the more or less unsatisfactory state of things with regard to the treatment of articular rheumatism until within the last year or two, when Dr. Maclagan struck the keynote to a better mode of action by his researches into the use of salicin. This physician published a paper in THE LANCET (March 4th and 11th, 1876) "On the Treatment of Acute Rheumatism by Salicin," from which it appeared that having been struck by some analogy between that disease and intermittent fever, Dr. Maclagan conceived that acute rheumatism might be of malarious origin, and receive benefit from the alkaloid derived from the willow bark. Without entering into any discussion of the theory which led to the experiments, there is no doubt that they were more or less successful, Dr. Maclagan detailing several cases of true rheumatic fever which, under the use of salicin, became convalescent, on an average, in four days. The first case treated was in November, 1874, and there is no doubt that Dr. Maclagan was the first person who drew attention to the value of salicin in rheumatism. Subsequently to the publication of the paper in THE LANCET, large numbers of cases of the disease were treated with salicin, but with somewhat varying results, and in my own case, I confess, without any success. The dose given was generally from twenty to thirty grains, or more, every two, three, or four hours, and large amounts were required to be taken before much benefit was obtained. Such was the demand for salicin that the price of the drug rose from 1s. 6d. to 10s. or 12s. an ounce; and at one time there was an absolute famine, and wholesale dealers would quote no price for it.

In the mean time German physicians had been trying the effect of the derivatives of salicin—salicylic acid and the salicylate of soda. The second number of THE LANCET of January, 1876, contained a notice of the observations of Dr. Reiss, in the Berlin Metropolitan Hospital, on the use of salicylate of soda, chiefly in regard to its action in reducing abnormal temperatures. Now, although salicylic acid and its soda salt may be valuable antipyretic agents in many cases of high temperature, independently of the nature of the disease, it soon became apparent that their good effects were especially marked in rheumatism. This led to the use of the drug in ordinary cases of rheumatic fever, and with the most satisfactory results. Some observers preferred the acid, some the soda salt. It is probable that the salicylic acid is the active agent in either case, just as the iodine is the active agent in iodide of potassium; but crude iodine is rarely given now, and in a short time I believe the salicylate of soda will be used in all cases where the action of salicylic acid is desired. It is very soluble, which the acid is not, and it is far less liable to give rise to unpleasant symptoms. I give the preference most decidedly to the soda salt as at present advised, though it is quite possible, indeed likely, that combinations of salicylic acid with potash, ammonia, and iron, may turn out to be very valuable. In any case of articular rheumatism, whether acute, subacute, or chronic, the salicylate of soda should be tried in doses of ten, fifteen, or twenty grains, every two, three, or four hours, according to the severity of the symptoms. It is best to give it alone, or in combination with a little spirits of chloroform or syrup of orange. As a rule, the good effects of the drug are apparent after eight or ten doses; the temperature fal's rapidly to normal, or even a little below, the pain and swelling of the joints disappear, and the patient is practically convalescent in two or three days; but it is better to keep up the action of the medicine for a week or so, as relapses are liable to occur if it be discontinued too soon. In some intensely rheumatic subjects it will be necessary to give it again and again before the disease is subdued, and these cases have been used as an argument against its efficacy. Some persons will not admit the value of mercury and iodide of potassium in the treatment of syphilis, and others question the protective power of vaccination against small-pox. All new remedies have to encounter the opposition of ignorance and prejudice, but the evidence in favour of salicylate of soda in the treatment of articular rheumatism is becoming so overwhelming that its great value must shortly be thoroughly established.

No doubt the drug every now and then produces dis-

agreeable symptoms—sickness, deafness, tinnitus aurium, and sometimes a peculiar cerebral disturbance; but these quickly vanish on a discontinuance of the medicine, which may usually be again given in a short time without any such result. In the earlier trials, when the salicylate was not quite pure, these objectionable symptoms were much more common than now. Dr. Murchison has suggested, in an able paper read before the Clinical Society on the 25th of last May, that the disagreeable effects of the remedy are due to suppression of the function of the kidneys, and has found albumen in the urine of patients who were taking the salicylate of soda, even when the drug was quite pure. This may be so, but at present I have been unable to collect any evidence on the subject.

One word in conclusion. On its first introduction, salicylate of soda was thought to be of *special* value in the hyperpyrexia of acute rheumatism, but about this there is, I think, some doubt. It controls the temperature by counteracting the rheumatic poison, but in those cases which I have spoken of early in this paper as malignant, it frequently fails to reduce the temperature, and is as ineffectual to cure the patient as large doses of quinine or the cold bath.

A CASE OF HYDROPHOBIA NOTED IN CHINA.

BY SIR WILLIAM R. E. SMART, M.D., K.C.B.,
INSPECTOR-GENERAL R.N.

THIS disease has been recently commented on in the daily press, agitating as to the relative value of the wound from the tooth of a rabid animal and that of the nervous excitability, natural or aroused, of the victim, with apprehension of possible development of the disease. And an inference has been aimed at that its development, like that of traumatic tetanus, may proceed from, or be aroused by, an unreasoning horror, which, in the case of the bite of a dog, is appeasable by the destruction of the offending animal, without ascertaining it to be really in a rabid state, even assuming that canine madness is not necessarily hydrophobic, or productive of that disease in mankind.

The pathological histories of hydrophobia and tetanus are very different, and the symptoms, so long as hydrophobia is unsuspected, may be at first assigned to dysphagia or dyspnœa with general spasmodic effort, to clonic convulsions, to angina pectoris, to malarious poisoning, and even to hysteria in a nervous temperament, rather than to lock-jaw, before the truth is elicited of their being the probable result of animal poison, which at once removes all doubts of the nature of the disease. Tetanus may be the consequence of a very insignificant puncture of the integuments, and hydrophobia may follow on a mere abrasion of the cuticle down to the absorbent dermal structure; but the injury can have been produced by no other instrument than the tooth of an animal, most frequently the dog, affected at the moment with rabies.

The case I am about to relate is one in which the dates, relative to the animal as well as to the human victim, were traced with all the accuracy of a ship's log, and therefore I conceive it to be worthy of professional record, independently of its merits in affording proof that the development of the disease was absolutely apart from that to which so much is imputed by some—viz., that it is attributable to fear suggested by knowledge of the character of the injury and of its possible results, which was never dreamed of in any single link of the chain.

On the 11th March, 1859, H. P——, aged fifteen, shipboy of H.M.S. *Dove*, was admitted to the naval hospital at Hong Kong. As the *Dove* did not bear a medical officer, he had been seen and prescribed for since midday of the 10th by two medical officers of other vessels. At 8 A.M. on the 11th, when received into hospital, his disease was diagnosed for the first time *hydrophobia*, of which neither he nor those who had been around him had any suspicion. By cautious inquiry it was elicited that he had been bitten by a dog on board the *Dove* on Christmas-day, seventy-five days before, and that the dog died of *distemper* within a few days afterwards. The unfortunate youth expired after a succession of agonising convulsions, with clear intellect, at 5 P.M. on the same day.

The clue being followed out, these facts were obtained. The *Dove* was the conducting vessel of Lord Elgin's expedition to Hankow, six hundred miles up the river Yang-tse-Kiang, in November and December, 1858. The senior officer of the surveying service shipped into her from the *Actæon*, taking with him a fine young Newfoundland-dog, fifteen months' old, littered at Shanghae, a playful pet. On the 20th November, the squadron engaged the forts and batteries at Nganking, about four hundred miles up the river held by the Taeping insurgents, when the dog became much frightened at the noise, and was so subsequently whenever a fowlingpiece was discharged or firearms were seen by him. On the 6th of December he took violent exercise over the river sands of Hankow. On some date between the 6th and 12th, while the expedition remained at Hankow, he fought with a Chinese dog belonging to the gunboat *Lee*, which had been brought on board the *Dove* by its owner, but there was no ground of suspicion, present or future, against that animal. On the 15th, Rover was taken into a Chinese village on the bank, where he was bitten and blood flowed, but he showed no fight until a second dog assailed him, when a severe tussle ensued, and he was accredited with bravery by his master.

In this recital of facts two points stand out prominently: that, at a severe cannonading between forts and ships, the dog received a lasting impression of alarm, predisposing him to nervous disorder; that, nineteen days later, he was bitten on shore by a strange Chinese dog, without provocation, to which he showed no resentment. (Query: Did this arise from an instinctive knowledge of a morbid condition of his assailant?) But he fought bravely as soon as another Chinese dog attacked him. The first point stands as predisposing, and the second as exciting, and in my opinion specific, cause of Rover's disease, of which the first manifestation would appear to have been during alarm on Christmas-eve, twenty-seven days from the predisposing, and nine days from the specific influences. Of this occasion of alarm and its result, I shall quote the words of the principal medical officer, as told to me by himself:—"On the 24th of December, when up the Yang-tse-Kiang, I was ordered to take passage in the *Dove*. When getting into the boat to go to her, I missed my footing on the gunwale, and partly slipped overboard. While regaining my position a Newfoundland dog, which was in the boat with Captain W——, flew at me, and seized me by the breast of my coat I attributed this to the nature of the animal in trying to save one in danger by water; but soon after getting on board the *Dove*, I discovered that the dog was distempered, my attention being called to his state through his having bitten several persons. I learned that the animal had been much excited lately by rough play, and had taken to dirt-eating. He was snappish, and bit his master, and after vomiting his food had returned to it. I did not know if he had been bitten, or how long he had been sickening. I ordered treatment for him, and requested he should be tied up, and when tied up he barked and howled piteously. He bit five or six people, who were all attended to by Dr. S——, who was with Lord Elgin as his surgeon. Captain W——, his master, was the first bitten, and the boy, H. P——, was one of the last. His injury was merely an abrasion across the back of the hand obliquely. I am sure the skin was not broken, and he received it by holding out his hand in passing the dog. He complained much of being put to pain by caustic for so slight an injury. All the injuries were on the hands. The parts were washed in water as hot as could be borne, and then freely causticked with nitrate of silver. In one case a perforation was made by the long canine tooth on the outer border of the thumb-nail, and I cut through the isthmus of skin, and laid the wound freely open, and applied the caustic deeply. I left the *Dove* on the 27th of December."

In this narrative we have a clear account of the accidents and injuries received, but the commander of the *Dove* gave me fuller particulars concerning the dog's illness which are worth noting, as follows:—"He became snappish, running round the deck, picking up straws, coals, &c.; he attacked

a sheep, bit at ducks and fowls (taking off the head from one of these), and snapped at his friends. He was then tied up, and remained quiet when covered with a sail; but if exposed he would start up suddenly and try to break his tether, howling piteously, beginning his cries with a barking noise. Medicines were given by the mouth and by injection. He allowed the coxswain to administer the remedies and to fondle him, but at last bit him also. He was put into the boat astern, and covered with a sail. He vomited at times and returned to it; he took no food for days, and it is doubtful whether he drank anything; and latterly there was a ropy slaver at the corners of his mouth. He became emaciated, and died at night, being found dead in the morning, after about five days' illness."

This description of the dog's state and behaviour is in the words of those who witnessed them, and, in my opinion, it is conclusive of the dog's disease being hydrophobia. It is very interesting as a record of the manner in which a case so pronounced escaped its proper definition, and as showing, what is really too frequent in all cases of madness of pet animals, that no precautions were taken until much mischief had been done.

From similar sources I may now proceed to describe the state and conditions of the victim. "He was in excellent health up to the date of this illness and had never been on the sick list at any time previous to it. He was of sober, steady habits, but of a timid, nervous temperament, always sensitive of any reproof. He had not undergone any unusual exposure or exertion. For several days previous to there being any grounds given for alarm, and during which he had no medical aid, he complained of headache, attributing it to a fall in childhood; and his increase of natural timidity called forth remarks; he had also lost his appetite. On the morning of the 9th of March he was decidedly worse; during that day he was observed to brush his hand frequently across his face, from an impression that there were hairs on it tickling him. He spat much, and was very thirsty; and in the evening he had a choking sensation, with inability to swallow, which brought on fits of difficulty of breathing, and spasms, which he attributed to flatulence. He asked to have a cup of water kept near him, into which he would at times dip his finger to wet his tongue; and although he made spasmodic efforts to bring his wetted finger to his mouth, a spasm would come on with difficult breathing, and he rarely accomplished his desire to touch his lips or tongue with his moistened finger. These symptoms continued through the night of March 9th. On the morning of the 10th he was taken to another ship-of-war for advice, and it was observed that while in the boat he would not face the wind. A medical officer saw him, and, considering it to be a spasmodic disorder, forced him to swallow ammonia with camphor mixture, which brought on an attack of difficult breathing with spasm. Later in the day he was seen by another, who, entertaining the same view, administered opium and applied fomentations with sinapisms to the seats of pain. He never complained of the bitten part. Next morning, being worse, and suffering agonising spasms of the abdominal muscles, with general convulsions, and violent retching efforts, expelling nothing save scanty mucus tinged with blood, he was brought to the hospital, where the entire hopelessness of his case was recognised. His sufferings continued till 5 P.M., when he expired, on the seventy-fifth day after having received an abrasion from the tooth of a mad dog. An autopsy exhibited all the typical changes found in hydrophobia. There were muscular rigidity of the body generally, purple lividity of the tongue, injection of the fauces, œsophagus, and cardiac end of the stomach, turgidity of the arachnoid and substance of the cerebrum, cerebellum, and medulla oblongata, with many dark puncta in the nervous substance. Spinal cord not examined."

Those who had been wounded by the same dog were at the mouth of the Yang-tse Kiang, 600 miles away, and my anxiety was aroused to ascertain their fate. I communicated the occurrence to the surgeon of the *Actæon*, in which they all were, inculcating every precaution. Happily, none of them had suffered; none had suspected the true nature of the disease in the dog. I received a reply dated April 11th, as follows:—"The nature of your communication rather startled me, as I had no idea of the cause of the boy's death. The officers and men who were bitten have never complained, and still believe the animal died of *distemper*, and such was the impression I received myself from a conversation I had with the captain. Every precaution shall be taken." I may add that no other person suffered subsequently, so far as I have ever learnt.

Interested deeply, I made inquiries as to the existence of the dread disease in China, where perhaps the proportion of dogs to natives is at least equal relatively to that in any other country. I found that English physicians there had never seen a case, but it was well known to the Chinese practitioners, and about that time it seemed to have been more than usually prevalent.

According to the Colonial Surgeon's Report, published in the Hong-Kong Government *Gazette*, March 19th, 1859, hydrophobia, a disease hitherto unknown in the colony, has made its appearance during the past year, two who were bitten by the same dog having fallen victims, one of whom died within six weeks to a day, and in the other the first symptom did not show itself till ten months after the bite. Dr. Hobson, the eminent medical missionary, having been eighteen years in China, writes in the annual report of the Chinese Hospital at Shanghai, dated December 14th, 1858: "Two or three cases of persons supposed to be bitten by mad dogs have been cauterised. I have not seen hydrophobia in China, but canine madness is mentioned in Chinese medical books, and is regarded as a highly dangerous and fatal disease. They recommend the part to be cut out, and strong purgatives to be administered." Dr. Sibbald, of Shanghai, informed me that he had never seen a case of it, and that Dr. Macgowan, who had been eighteen years in China, had never had a case under his care, and only knew of two cases which occurred at Ningpo.

In conclusion, the following points which were brought out in evidence may be recapitulated:—

That hydrophobia is a well-known and much-dreaded disease in China, and appears to have fallen more under the notice of Europeans there in 1858 than previously; and from its being so well known to Chinese and so little to European physicians, it may be inferred to occur more frequently in the interior than in the coast towns.

That in the instance now recorded by me of the dog Rover, the disease was the result of a bite by a Chinese dog, received when about five hundred miles up the Yang-tse-Kiang river.

That the specific nature of the poison was evinced in its transmission through the dog into the system of the boy through a mere abrasion of the skin of the hand.

That both the dog and the boy in whom the disease manifested itself were, the one casually and the other constitutionally, of excitable nervous temperament, that may possibly have conduced strongly to the development of the disease, which would, however, not have arisen in either case of dog or boy without a specific causation—the bite of a rabid animal—unless it be assumed, from absence of positive evidence, that the disease arose spontaneously in the dog Rover, and was not in him the consequence of the bite received on the 15th December from a dog whose history and condition are unknown.

That the boy was, up to the day of his death, entirely free from any mental impression concerning the nature of the disease of the dog, as well as of the connexion of the very slight textural injury he had received with the dog's morbid condition; so that, in whatever way his constitutional excitability may have been impressed, it lay totally apart from any mental apprehension.

That those who were worse bitten than himself, and escaped all morbific changes, were equally devoid of such apprehensions under the undisturbed belief that the animal had succumbed to ordinary distemper.

That the medical men, who wisely observed every precaution at the time of injury, did so by rule, and not from suspicion of the dog being other than simply distempered, after the manner of the young of his kind, and that all those who continued near him up to the fatal termination entertained the same conviction, some of whom watched the boy also during his illness, and showed more than usual powers of observation, retained the same conviction, and were unable to connect the two comprehensive facts of the bite and the disease.

That two competent medical men, who treated him through the day immediately preceding the fatal result, did so without entertaining any suspicion of the true value of the symptoms, as leading to a diagnosis of his disease,

and that the case is free throughout from the slightest taint or blemish of mental operation, and purely one of material cause and effect.

That the dog after a few days of disorder presented pathognomonic signs of the disease on the ninth day after being bitten, and the boy did so after a few days of headache and malaise on the seventy-fifth day.

Lastly, the early history exhibits in a strong light the mischief that too frequently arises from leniency in judging the nature of the symptoms of the first stage of the disease in pet domestic dogs. These should be more assiduously guarded in every instance where, after receipt of a tooth injury, there is shown the slightest alteration in health and behaviour; and the question of destruction of the animal should be at once entertained as soon as there is any manifestation of unwonted quarrelsomeness towards other brutes, and carried into resolute effect on the first appearance of snappishness or of disaffection towards its human protectors, as further delay is dangerous in the first degree to mankind, and inconsiderate to the animal itself.

CASE OF HYDROPHOBIA.

BY JAMES ADAMS, M.D., M.R.C.S.

C. J——, aged seventeen, a mason, in good health, was bitten, on July 6th, 1877, in the thumb and ball of the thumb of the left hand, by a dog which was generally supposed at the time to have been mad, and the fact of its having been shot early next morning by the owner tends to confirm this opinion. C. J—— immediately went to a surgeon, and the wounds, consisting of three or four tooth-marks, were cauterised with nitrate of silver. The next morning I was asked to see him, and I applied the nitrate of silver more freely, thoroughly cauterising each mark and around it. The friends were much alarmed at what had occurred, for they were afraid the dog was mad.

The wounds healed up, and he resumed his work; and I heard nothing more about the bite till summoned to see him on Sept. 11th, when his father gave me the following account of his premonitory symptoms:—He went to work yesterday as usual, and worked till midday, when he complained of an aching and numbness in his left arm, and also of some numbness about his lower extremities. In the evening he first complained of his throat, and said he could not swallow properly, and that his breathing was difficult. He was able, however, to drink some tea and take a little bread-and butter. He passed a very restless night, with scarcely any sleep, and at times he was somewhat excited, pacing up and down the room, and exclaiming that he could not breathe.

I saw him at 10 A.M. He was dressed and down stairs; his manner was dull and uneasy, but all questions put to him were answered readily and intelligently. He had had no breakfast, assigning as a reason his inability to swallow. I gave him some milk to drink, and he took a little into his mouth, but spat it out again, saying he could not swallow. I then tried him with a little in a teaspoon, and after urging him to take it, he swallowed it with a gulp. Told me his throat was sore, and on examining it, I found the fauces and pharynx were looking inflamed, due perhaps to the irritation caused by the frequent spitting which commenced in the night. He put his hand to his throat two or three times, as if feeling uneasy there. Said his left arm ached in its whole length; but neither now nor subsequently did he complain of any special pain at the situation of the bite, and there was no redness or peculiarity of any kind there. Once or twice afterwards he complained of pain in the elbow, and once he said his middle finger was very painful; tongue furred; no lyssi visible; I looked for these soon after the bite, but never discovered any then or afterwards; bowels acted freely four or five times yesterday. Pulse 84; temperature 99°. Ordered half a drachm of solution of hydrochlorate of morphia every four hours.—2 P.M.: Temperature 99·8°; pulse 88. Fancies he can swallow better, and has taken corn-flour, and drunk a little currant-water.—8.30 P.M.: Temperature 100°; pulse 100. Breathing more "catchy"; says he has knobs in his throat; has eaten a biscuit, but swallows with more difficulty, and has more frequent paroxysms of the sensation of choking, causing him great distress; his manner is more excited, and he is slightly delirious; he is constantly spitting up white, viscid sputa, which he hawks up with violent efforts; is very thirsty; tongue has a creamy fur on it; pupils dilated; eyes wild and staring.—11 P.M.: Temperature 100·6°; pulse 80. For the first time he has refused to take his medicine, and I was obliged to press him before he would. Asks to have all draughts of air kept from him, as they bring on the paroxysms, and the mere act of lifting his bedclothes to cover him up, brought on a sharp attack. Several times he tried to blow his nose, and could not, for each time the handkerchief touched the nose he went off in a violent paroxysm, appearing for many seconds as if he would be strangled. — Midnight: Gave him a grain of morphia hypodermically, and left him quieter.

Sept. 12th.—8 A.M.: Temperature 103°; pulse 96. No sleep after the morphia. High delirium all night, which at the time of my visit was of a religious turn. Intense thirst; can swallow no better, and the paroxysms continue just the same. Repeated the morphia injection.—11 A.M.: Temperature 102·5°. Morphia had no effect. Gave him an enema of one ounce of brandy and three ounces of beef-tea. I did this without difficulty, and it was retained.—2.30 P.M.: Spitting frequently and in all directions, and sometimes on those about him; foaming at the mouth, and holding his tongue out like a tired dog. He is more violent, and struggles furiously with the two men and woman who are required to hold him. Conjunctivæ slightly congested; pupils widely dilated. Gave an enema of half an ounce of syrup of chloral and three ounces of beef-tea. Has been sick several times, vomiting up bile and other liquids.—4 P.M.: Much quieter; got quieter about half an hour after the enema of chloral and beef-tea.—7.30 P.M.: Temperature 103°; pulse very weak, and I could not count it. Still has the "busy" delirium, without the violence. Another enema of half an ounce of chloral, three ounces of beef-tea, and one ounce of brandy. Saw him again at 8.30 P.M., when he seemed weaker and quieter, and at 10 P.M. he died from exhaustion.

Remarks.—In this case there was no fear of water or any liquids *qua* liquids, and it was only when the poor fellow tried to swallow them that a paroxysm came on, and just as violent a paroxysm was caused by trying to swallow solids as liquids. The mere idea of swallowing *anything* was sufficient to set up violent paroxysms which every time threatened to suffocate him. The patient and his friends laboured under a strong apprehension from the first that the bite would produce hydrophobia. Had this anything to do with the development of the disease? As to treatment, if I ever meet with another case, I shall be disposed to begin earlier with chloral, to try bigger doses, and to push it until it had produced a sensible effect on the mania. At one time, when he was very violent, I attempted to put him under chloroform; but he resisted, and I gave up the attempt, for I do not think it would have been wise to have used much force and to have set up a series of violent paroxysms, as it must have done. On looking through the notes, it will be observed that from the time I first saw him to the following morning there was a gradual increase of temperature up to 103° F., above which it never went, and this rise of temperature coincided exactly with the development of the disease up to its most acute and characteristic appearance, marked by high delirium, constant suffocative spasms of a most agonising type, intense thirst, and a frequent spitting of white viscid sputa unaccompanied by cough. I could not obtain a post-mortem, and therefore cannot say whether there was any pathological condition to account for the rise of temperature. Rigor mortis came on in less than an hour after death, and twelve hours after it was well marked. There was no priapism in this case, nor was there any involuntary passage of urine or fæces. He passed urine two or three times on the day of his death, and, except being rather high-coloured and cloudy, it was quite normal.

This makes the third case of hydrophobia which has occurred in this county this year.

Ashburton, Devon.

NOTE ON A CASE OF HYDROPHOBIA.

BY ROWLAND H. COOMBS, L.R.C.P. (LOND.),
ASSISTANT PHYSICIAN TO THE BEDFORD GENERAL INFIRMARY.

ARTHUR C——, a very healthy-looking, well-nourished child, aged two years and nine months, the son of a farm labourer at Ravensden, a village four miles from Bedford, was bitten by a rabid dog on the roadside on July 7th.

There can be no doubt that the dog was mad; it was a stray animal without an owner; it afterwards bit a dog (since destroyed) in the same village, and after wandering to another part of the county, and biting two other dogs, died, worn out and exhausted (its end being expedited by a constable), at Clophill, nine miles from Bedford.

The wound was a lacerated one, about one inch and a half long, at the side of the right elbow, with two small punctured wounds in front of the joint.

The wound was thoroughly cleansed, cauterised with nitrate of silver, and dressed within two hours of the time when the bite was inflicted. It healed up very readily, without any trouble, leaving a slightly raised and thickened cicatrix.

From the time of the infliction of the bite to the outbreak of the disease on the thirty-fourth day the child frequently spoke of the dog with strong feeling, and said "Nasty dog," "Wouldn't father shoot it?" &c. &c., showing that the recollection of the bite was exerting an influence on the child's nervous system. The mother stated that during the period preceding the outbreak of the actual disease the sleep of the child was disturbed by "deep sighings and startings."

The child remained in apparent health until the thirty-fourth day, when it had a restless night, started very much, and cried out in its sleep. When visited on the thirty-fifth day, it was in a state of excitement and nervous fear; terrified expression of face; irregular spasmodic startings of limbs and body; heat of skin; pulse 160; pupils large, and act freely; will take neither food nor drink; a cup of cold water was put into its hands, and it brought it up to its mouth, and then suddenly thrust it aside in great terror; any attempt to give the child food or medicine excited it very much. The mother stated that at 11 A.M. on this day (the thirty-fifth) the child tried to bite her.

Thirty-sixth day.—Condition much the same; refuses drink, though evidently wishing for it. The symptoms did not alter till within a quarter of an hour of its death (11.30 P.M.), when it became tranquil, and, as the mother stated at the coroner's inquest, died "with a pleasant smile on its countenance."

No autopsy. Rigor mortis sixteen hours after death very slightly marked.

It may be noted that in this case the true hydrophobic stage set in, as it does "in the greater number of cases, between the thirtieth and fortieth day," and that death occurred, as it generally does, "before the end of the second day, life very rarely having been prolonged beyond the fourth day."[1]

THE ETIOLOGY OF HYDROPHOBIA.

BY ALFRED GINDERS, M.D.

AFTER the evidence given us by Dr. Muscroft[2] and Mr. Fleming, that rabies is not a necessary factor in the production of this disease, some modification of what has hitherto been regarded as its orthodox etiology seems inevitable. Dr. Aitken says, "No instance is known of any person being affected with hydrophobia unless antecedently bitten by a rabid animal." If this were really so, either a number of observers have made lamentable errors in diagnosis, or the animals have been really rabid when, to all appearances, they were in perfect health—two most improbable alternatives, as I cannot understand how a man who has observed a case of hydrophobia carefully can conceive an error in diagnosis possible. To confound it with tetanus, or any other nervous disorder, appears to me more difficult than to recognise the only too well marked symptoms of the genuine disease; and, on the other hand, it is equally difficult to believe that there is a form of canine rabies which has no external manifestations. Shall we not rather be driven to modify our old ideas by following out the line of thought indicated by one or more of the following speculative probabilities?

1. That some other diseased condition in the dog than that of rabies may render the saliva poisonous, and capable of originating the malady. 2. That a temporary toxic state of the saliva may be induced by feeding on putrid flesh. 3. That the suppression of some other secretion may cause the determination of poisonous elements to the salivary glands. It is a well known fact that the secretion peculiar to the anal glands of the black skunk of America is suppressed during rabies. 4. That in certain constitutions there may exist susceptibilities, either temporary or permanent, upon which the saliva, even in its normal condition, may act as a poison; and that its virulence may be determined by the febrile state accompanying a variety of dog ailments, not excluding the *æstus veneris*. 5. That the saliva may act as a *cabalytic*, determining the formation of a blood poison by the combination of elements it meets with in the blood, and remaining inert in the absence of such elements. This would account for the escape of so large a percentage of those bitten. 6. That emotional excitement may produce a temporary toxic condition of the saliva. We have affirmative evidence in this direction in the well known influence of passion on the milk of the human female, and we know how marked is the influence of emotion on the secretions of the liver, the intestines, and the mouth.

It is more than probable, however, that the mysteries surrounding the etiology of hydrophobia will only be unravelled by accurate and painstaking observation of post-mortem appearances. At present the evidence we have is confusing and contradictory. On the one hand we are told that the appearances are those of hyperæmia, affecting not only the brain, spinal cord, and their meninges, but also the entire gastro-pulmonary mucous tract, including its follicular and conglomerate glands; all of which lesions, according to Niemeyer, arise just prior to dissolution, and are due to the disturbance suffered by the functions of circulation and respiration during the spasmodic seizures. Other observers speak of a condition of softening, thickening, and matting together of parts about the origins of the seventh, eighth, and ninth nerves in the medulla oblongata, which certainly suggests that a process of slow destructive change must have been going on long prior to the development of the symptoms, changes which we must remember may not always be apparent to the unaided vision, but which, as Aitken suggests, may yet be demonstrated by the microscope and the test of specific gravity.

That such a process of slow destructive change really takes place in these cases, receives affirmative evidence in the lethal character of the resulting symptoms, and the futility of treatment; and negative evidence, on the other hand, in our knowledge that such changes in the great nerve-centres do not run their course unobserved until they eventuate in a fatal explosion, but are usually marked by sensory, motor, or mental premonitions, none of which are present during the incubative stage of hydrophobia.

Normanton.

[1] Gamgee: Art. Hydrophobia, Reynolds's System of Medicine, vol. i., 2nd edit., pp. 343, 345.

[2] THE LANCET, April 15th and May 20th, 1876.

ANALYSIS OF EIGHT HUNDRED CONSECUTIVE MIDWIFERY CASES.

BY W. H. PLAISTER, M.R.C.S.

To those taking an interest in obstetrical statistics, the following record of 800 cases, attended by me consecutively, may be of some use.

Of the total number of children born, 411 were males and 389 females; 154 were primiparæ.

Twins occurred 13 times. In nine cases, one followed the other immediately; in the remainder, there were intervals of from half an hour to five hours. All, excepting three, were born naturally; in one, both presented with the

breech; and in two others, one with the breech and the other natural. Two of the twins occurred in primiparæ.

Breech presentations occurred 15 times, none of which presented any features of interest.

The *shoulder* presented twice. In one case turning was effected without difficulty; in the other, considerable trouble was occasioned, owing to the detachment and descent of the placenta, a portion of which had become jammed between the shoulder and os uteri. This, being further complicated by a strong and irregular contraction of the uterus, rendered the introduction of the hand and the operation of turning a matter of some difficulty. The feet were eventually brought down, and the case did well.

The *face* presented once; originally a brow presentation, it had become converted into a face. This occurred in a multipara and required the application of the forceps.

Footling cases occurred twice, and the *knees* presented once. In one case a hand descended by the side of the head. I found it easier to turn and bring down the feet.

The *back* presented on one occasion. The fœtus was about seven months, and was dead, and, being doubled up on itself, gave at first some little difficulty in diagnosing correctly its position. I turned, and the case did well.

The placenta was adherent in nine cases, and had to be removed by the hand.

Ruptured perineum, sufficient to call for the use of sutures, occurred in three primiparæ. When the laceration has not extended to the anal ring, I find it better that the patient should keep her legs tied together for a few days, when healing takes place of its own accord.

The forceps were applied in twelve instances. This, according to modern ideas, was very seldom, being only one in about sixty-six cases. Amongst my notes I find I have designated thirty-one as being tedious—that is, that delivery took place naturally, but with more than usual difficulty. Had I to attend these cases over again, I should not hesitate to apply forceps in each case, as my opinion of them, when properly applied, has considerably altered. In seven cases they were used owing to the slow progress in primiparæ. Twice in inefficient pains. In three cases in multiparæ: one a face presentation; the other two owing to the large size of the children, one weighing 12 lb. and the other nearly 13 lb.

I regret I did not keep an accurate account of the number of cases, with the results, in which I gave ergot; but I can truly say that it has never met with the success in my hands that it has in those of others. I have tried every form, but prefer the liquid extract of the B.P. The dose I usually give is two drachms, followed by a similar dose in half an hour, if required. My experience is, that it is very uncertain in its action; and if uterine contraction has followed its administration, I have never felt satisfied whether the same contraction would not have occurred if it had not been given. This is simply my experience, and I should like to hear the opinion of others whose experience has been larger than mine.

Of the total number delivered four died within one month of their confinement; only two of them from puerperal causes. Two died of pneumonia, one being delivered on the third day, and the other on the fourth day, after being taken ill. Of the other two, one died from pelvic cellulitis about a fortnight from the date of delivery, the abscess bursting externally midway between the umbilicus and pubis. The remaining fatal case occurred in a delicate woman with a narrow pelvis. The long forceps were applied, and the child, on being extracted, was found to weigh 13 lb. The patient never really rallied, but died from asthenia some days after. One woman was confined whilst nursing her mother with small-pox. She took it, and was confined four days afterwards; her infant took it three days after birth and died. The mother made a good recovery. Another patient was confined whilst nursing three of her children with scarlet fever. She did not take it, though she could not have had a much better chance.

I have never found any ill effects result from rupturing the membranes when the os is the size of a shilling, but find that the child's head forms a better wedge than the bag of liquor amnii. I cannot recall any instance where there has been retarding of the labour through this procedure. I am further convinced that much assistance can be rendered by the accoucheur gently dilating the os uteri with the finger during a pain after rupture of the membranes.

These cases I lay before the profession, not because they present any abnormalities or features of interest, but simply as an analysis of a few consecutive ones occurring in private practice.

Tottenham.

A Mirror of HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF EMPYEMA TREATED FIRST BY PARACENTESIS, AND SUBSEQUENTLY BY ABLUTIONS EFFECTED IN A NOVEL WAY BY MEANS OF UTERINE STEMS; REMARKS.

(Under the care of Dr. SOUTHEY.)

ALTHOUGH the testimony of those physicians who have had the best opportunities of observing cases of empyema has year by year become more confirmatory of the propriety of freely evacuating the fluid which collects in the pleural cavity, it may be doubted whether the advantages of this mode of treatment have hitherto been fully appreciated. Even by those who do not hesitate to let out the purulent fluid, the length of time that the cavity takes to close up has always been felt to be a drawback to the practice. The suggestion of Dr. Southey, to employ short stems instead of a long drainage-tube, promises to get rid of this. At all events, it must be acknowledged that in the subjoined case the result did not stultify the ingenuity of the proposal.

Robert S——, aged seventeen, anæmic, undersized, looking fourteen to fifteen only, was admitted on Aug. 13th for pleuritic effusion. He was the subject of old cardiac disease; mitral regurgitation with dilatation and hypertrophy following rheumatism; had been in hospital three times during the past year for anasarca of legs, bronchitis, &c., the results of heart failure.

The present illness began Aug. 10th, 1877, with pain in left lateral region, attended by dry, harsh, painful cough; has had little sleep, and been feverish ever since; no distinct initial rigors. Pulse 108; temperature 101°; respiration 42. Tongue furred but moist; bowels open; urine high-coloured and scanty; general dulness over left lung, front and back, except in supra-scapular and close beneath left clavicle, where tympanitic resonance prevailed; no breathing-sounds, and absence of vocal fremitus over area of dulness; heart's apex felt in fourth interspace, one inch outside left nipple; systolic murmur at apex. Here there was evidence of effusion, but with little pressure and only very slight displacement of the heart; its ordinary apex-beat, upon reference to a former note of his condition, was between fifth and sixth ribs, one inch outside left nipple. Treatment by diuretics—squill, iodide of potash, and acetate of potash—was initiated.

During the ensuing week his condition did not alter materially. The highest temperature recorded was 102·2°; the most rapid respiration 50 per minute; the pulse fluctuated between 96 and 108. Urine rarely exceeded twenty-five ounces per twenty-four hours, was of deep-amber colour, neutral, containing no albumen or sugar, and no deposit; sp. gr. 1030.

August 21st.—Physical examination: Resonance still marked in left supra-clavicular and supra-scapular regions; dulness elsewhere on left side; ægophony at angle of left scapula.

28th.—Appetite and general condition improved; eats a chop. Still has pain in left side and troublesome cough. Bowels regular. Urine passed in fair quantity, 20 to 30 ounces daily. Pulse 77; temperature 99·6°; respiration 32.

Sept. 10th.—Temperature has gone up during last week steadily. Patient manifestly less well. Pulse (average) 100; temperature between 102° and 104°; respiration 34 to

46. Left side absolutely dull except at apex, and by measurement expanded. Cardiac impulse pushed over to midway between right mamma and midsternal line. Digitalis has been employed for last four days in treatment.

17th.—General condition unsatisfactory. Night much disturbed by cough. Evening temperature between 103·3° and 103·8°; pulse 100; respiration 36. Still can lie down. Bowels regular; appetite small; tongue clean. Urine, twenty-four hours' average, 560 cc., equalling about 18¼ oz., sp. gr. 1023, percentage of urea 3·3 per cent.; total quantity 18·48 grammes, or about 280 grains. Physical signs: Upon left side unaltered, but evidence of pressure beginning to provoke congestive changes in right lung. Right lung: Resonance at root and upwards apparently impaired, but good downwards towards base. Ægophonic voice-sounds conducted over to right side of spine. Friction sound at base of right lung; sibilus and slight crepitation râles all over it, but most at upper parts.

Operative interference was now decided upon by Dr. Southey, in consultation with Mr. Morrant Baker. On the 19th an exploratory puncture was made with a small trocar and cannula. Then an aspirator was used, and ten ounces of thick fetid pus were drawn off. The relief was inconsiderable; and, at Dr. Southey's wish, two openings were made into the thoracic cavity by Mr. Baker, the patient having been put under chloroform. The first opening was made in the fifth interspace in the axillary line, the second in the ninth space more posteriorly, at anterior edge of latissimus dorsi. A pint or more of very fetid pus was evacuated, and the cavity was afterwards washed out with Condy's fluid and water. An india-rubber uterine stem was now inserted into each opening. The stems appeared admirably adapted for washing out the chest. For this purpose, an india-rubber tube and funnel only were employed, the junction with the orifice of the stems being effected by tapered glass ends, and after washing out, the orifices of the stems were closed by tiny pegs of wood.

For the first two nights after the operation a morphia draught was given, for the lad was more than usually nervous and excited by the chloroform and the operation. On the night of the operation the pulse was 96; temperature 98·4°; respiration 28. For the first few days the pleural cavity was washed out with warm Condy's fluid and water, and subsequently with a salicylic acid lotion. The temperature never rose again, and the boy's health improved daily. On Sept. 28th it was recorded that the pus evacuated was not nearly so fetid, but was not quite sweet. On Oct. 1st it was quite sweet, and the cavity contained only nine ounces of fluid. On Oct. 8th the heart had so far returned to its normal position as to beat to the left of the left mamma, and its impulse was felt close against the anterior tube. The physical signs demonstrated expansion of the affected lung, which probably pressed upon this tube and prevented the flow of fluid through it. It was therefore removed. Twenty-four hours subsequently this opening closed.

Oct. 12th.—Right lung resonant all over; breathing good at apex, behind somewhat puerile; large bronchial crepitation at base. Left lung dull from level of the ninth dorsal spine downwards posteriorly, from level of the sixth rib downwards in axillary line, and from the third rib downwards in front. Breathing sounds heard above of a coarser tubular kind, with crepitation and various extraneous sounds due to fluid in air about the lower opening below. Loud systolic murmur heard all over the cardiac area and behind.

On Oct. 14th it was noted that scarcely any pus escaped when the plug was removed from the back opening; the front one had been entirely closed about a week. The abscess cavity held about an ounce and a half of lotion, when filled by funnel and india-rubber tubing, but the lotion returned nearly unaltered in appearance. There was no pus discharge. The side had sunk in considerably. The heart now beat in normal situation. The appetite was much improved, and the boy appeared as well as anyone with so grave a valvular heart affection could.

Clinical remarks.—In cases of pleuritic effusion Dr. Southey draws a wide distinction between those which induce distension of the affected side and those which do not. When effusion is indicated by the physical signs he is in the habit of directing careful measurements of the chest to be made, by means of the cyrtometer, and he has daily records kept of the effects of pressure. As evidences of these he reckons, first, displacement of the heart; second, congestion, hyperæmia of opposite lung, crepitation over this lung, œdema, feebleness and emptiness of the pulse, cyanosis, diminution in the quantity of the urine, venous hyperæmia of the kidneys, and albumen in the urine.

It is Dr. Southey's rule never to interfere by tapping early in acute pleurisy—i. e., within the first nine days, unless the evidence of pressure is manifest, and the distress of the patient from the presence of the fluid is great. Such occurrences are exceptional within a fortnight. After that time he usually advises tapping under water, taking all care to exclude air, and closing the wound after the operation. In empyema he has hitherto employed either free incision with treatment of the case like an open abscess, washing out the chest daily, or a drainage-tube with two openings into the thoracic cavity. His experience has taught him that without two openings or one large one the recovery is long and protracted, and the ultimate result at best attained by great subsequent deformity.

In the present case Dr. Southey tried the novel plan of employing two uterine stems in each opening in place of the old drainage tube with happy results. The stems are easily introduced, they are protected from slipping either in or out by their construction, and they do not interfere with the formation of granulations and the process of healing upon the inside of the pleura, as there is every reason for supposing a traversing tube does. He considers the latter too like an old seton in its action. Furthermore, he does not approve of air being sucked in and out at the openings which are necessary for merely washing purposes, believing that this must interfere with the inspiratory pressure which ought to be directed centrifugally through the bronchi to assist the expansion of the air-cells of the collapsed lung. The uterine stems, made of india-rubber, admit of being completely closed at their external orifices by means of little plugs, or by a gutta-percha tissue valve.

The diminution of the abscess cavity by expansion of the lung is indicated by the lessened quantity of fluid that the empyemic pleura will contain.

Washed out by Potain's method, as Dr. Southey advises, with a funnel and india-rubber tube with glass communicating junctions and clips upon the tube, the size of the abscess cavity admits of being readily measured by the amount of its fluid contents, and thus the progress of repair can be estimated.

In this case, as the lung expanded, the cyrtometrical measurement showed that the chest wall collapsed and sank in to meet it, upon the anterior and lateral portions of the thoracic wall, but the chest posteriorly expanded rather than sank in.

The lotion which was employed for washing out the chest contained two grains of salicylic acid, one drachm of spirits of wine, to one ounce of water, and was carefully warmed to a temperature of 100° F. before being introduced into the chest. The greatest care was taken to avoid pressure in its introduction, the height of the funnel not being greater than was required to enable the fluid to search the cavity completely, while the drainage of the fluid from the sac was secured by siphon suction into a vessel placed beneath the bed.

The whole process of washing out the chest was very carefully carried out once every day under all due precautions for securing absolute cleanliness in the apparatus employed.

CHARING-CROSS HOSPITAL.

INJURY TO ULNAR NERVE; PARALYSIS; RECOVERY.

(Under the care of Mr. BELLAMY.)

THE chief points of interest in this case are the well-marked anatomico-physiological symptoms which the injury gave rise to, and its rapid recovery under treatment.

A little girl, aged nine, was brought to the out-patient department on August 16th with the following history and symptoms. She was getting over a stile, with a basket in her hand, when she stumbled. She could not say whether she struck her arm or not, or whether she extended it out sharply to prevent a fall; at all events, the contents of the basket (eggs) were not in any way damaged. When she came as a patient the thumb and little finger were crossed, the remaining fingers being perfectly normal. There was want of sensation on the surfaces of the little finger and on

the ulnar side of the ring finger, paralysis of the ball of the little finger, and obviously of the inner head of the flexor brevis pollicis and adductor pollicis, well-marked wasting of the flexors supplied entirely and partially by the ulnar nerve, with want of power of grasp, causing a flattening of these muscles. Mr. Bellamy at first thought the girl might have struck the overhanging internal epiphysis, and that its dislocation caused pressure upon the nerve at the joint. This, however, was not the case on careful examination. Well-marked reaction was obtained by the use of twenty-five cells of a Leclanché battery, and on subsequent visits by a far less powerful current. The girl was ordered steel and strychnine solution, and was under treatment without any benefit as an out-patient for a fortnight. She was then admitted into the hospital, and the treatment continued, when somewhat suddenly the opposed thumb and little finger regained their normal position and the power of ulnar flexion returned.

In this case either the ulnar nerve received a severe bruise or the nerve had a sharp stretch, probably causing an effusion into its sheath, placing it in a state of concussion as it were, and the subsequent absorption, aided by therapeutical treatment, effected a cure.

The case has a somewhat interesting bearing, perhaps, medico-legally. Supposing the patient to have been considerably older, and more skilled in the artifices of the world, malingering might have been suspected, or perchance the idea of the so-called element of hysteria might have been entertained; and in either case no such rapid result would be likely to have been attained by the simple means resorted to in this instance.

DORSET COUNTY HOSPITAL.

TRAUMATIC ANEURISM OF THE RIGHT RADIAL ARTERY CURED BY DIRECT PRESSURE.

(Under the care of Mr. GOOD.)

For the notes of the following case we are indebted to Mr. Herbert J. Capon, house-surgeon.

James F——, sheep-shearer, a tall, thin, but healthy-looking man, aged forty-five, residing at Wareham, was admitted on June 29th. While shearing on June 14th at Wimbourne, a fellow-workman turned round suddenly, and accidentally thrust the point of his shears in a diagonal direction into the middle of patient's right forearm, about one inch and a half deep, over the radial artery. The patient stated that he lost about a pint and a half of blood, which escaped in a jet. He placed his thumb on the wound, and went to the nearest surgeon, who plugged the wound and put a compress over it. Returning home at night, he went to his doctor, who did not disturb the wound for a few days, simply redressing it, without removing the plug. The plug was removed about a week after the accident, and a small tumour, about the size of an ordinary hazel-nut, gradually projected from the wound, having the appearance of a bunch of granulations, and pulsating visibly. On compressing the brachial artery, the pulsation ceased, as also did the thrill and bruit heard on applying the stethoscope. This was the state of things on admission, added to which the forearm was excessively tense over the flexor muscles, and much discoloured, the extravasation extending up the upper arm for a short distance. The wound looked healthy. Flexion and elevation were at once resorted to, and an anodyne administered to relieve pain.

On June 30th, at a consultation, it was resolved to keep the limb at rest, and to apply lead lotion. Next day the bruit had gone, and also pulsation in sac, but the arm was more tense and painful. On July 3rd the aneurismal sounds had returned; the arm less painful, and somewhat less tense, and the wound was healing. Temperature 98·5°. Flexion and elevation and the lotion continued. On July 7th the superficial wound had healed, but the bruit and pulsation continued. Esmarch's bandage was applied over hand and arm for two days. On the 10th an ordinary bandage was applied. The symptoms somewhat diminished in degree, but they were still present. The circumference of arm less by about half an inch. On the 14th a compress of sheet lead was firmly strapped over the aneurism, and bandaged down, by this time the cicatrix being thought sufficiently firm to bear pressure. Three days after the bruit was but very slight. On the 21st, on removing compress, a depression existed, and all symptoms of aneurism had disappeared, although the arm was still very boggy.

He was discharged on July 26th, with instructions to report progress in a fortnight's time. On July 28th he was readmitted. The part subjected to pressure had sloughed, and from the wound, which was as large as a sixpenny-piece, a considerable quantity of broken-down blood was escaping. Poultices were applied. There were no signs of aneurism. The discharge of a dark offensive-smelling blood continued for about a week, when suppuration of the subcutaneous cavity ensued. Pus continued to discharge till August 13th, when the opening healed up, leaving a depressed cicatrix, and no symptom of aneurism.

He was discharged on August 16th. On Sept. 1st the cicatrix was about as large as a threepenny-piece. He stated that all he felt was a slight weakness in the wrist. The radial pulse at the right wrist has about half the power of the left.

LIVERPOOL NORTHERN HOSPITAL.

RUPTURE OF DIAPHRAGM; HERNIA OF STOMACH AND TRANSVERSE COLON; IMPACTED FRACTURE OF NECK OF FEMUR; DEATH.

(Under the care of Mr. CHAUNCY PUZEY.)

J. D——, aged fifty-seven, a labourer, was admitted at 2 A.M. on May 21st, 1877, having fallen off a scaffolding twenty-four feet in height on to his left side. No further particulars were obtainable.

When seen by Mr. Puzey some hours after, his condition was as follows. He was a well-built, healthy-looking man, somewhat obese. There was very slight appearance of collapse; the breathing was somewhat oppressed, and the face was rather dusky; the right side of the chest expanded more fully than the left. He complained of pain, or rather uneasiness, in the left side of the chest, but careful examination failed to detect any fractured rib. The percussion note over this side was clear, over the lower part abnormally so; but auscultation showed that the amount of air entering the left lung was small when the degree of resonance was considered. Moreover, now and then a slight gurgling or tinkling, independent of the respiratory movements, could be heard. This sound evidently proceeded from the stomach, and the question arose whether it was only conducted from a distance; but against this theory was the fact that there was no solidified lung or similar body to assist in the conduction of such sound. The stethoscope was applied to the axilla, and again the tinkling sound of air and fluid was faintly heard in this locality. Air entered freely into the upper half of the left and into the right lung. The stomach resonance was normal, but appeared continuous with that at the lower part of the left chest. A diagnosis was hazarded of diaphragmatic rupture with hernia of stomach or intestine, probably the former.

The left leg was much everted, and this eversion could be only partially overcome by the patient's voluntary effort. Attempts at rotating the foot inwards or flexing the hip-joint gave rise to pain. There was much fulness, from deep extravasation of blood, in the trochanteric region, rendering the taking of the ilio-femoral triangle measurements all but impossible; but repeated measurements from the anterior spinous process to the inner malleolus showed shortening of the left lower extremity to the extent of a quarter of an inch; and it was ascertained that there had been previously slight shortening of the *right* limb, owing to a fracture of the *right* femur during childhood. It was therefore concluded that there was now an impacted fracture of the neck of the left femur, and no attempt was made to obtain crepitus. A long splint, without extension, was ordered.

Symptoms of obstructed respiration and imperfect aeration of blood increased; the man gradually became drowsy and more feeble, but suffered little pain. Next afternoon, thirty-six hours after the accident, he was semi-comatose; his face livid, and covered with cold sweat. The resonance of the left chest had increased, but no air could be heard to enter it. The right lung was doing double duty, and suffering accordingly; the breath-sounds being loud, harsh, and mixed with large moist râles. The man, being roused and asked whether he could not cough and relieve himself of

some of the mucus which was troubling him, made use of the expression that "he wished he could, but that, although he tried, he could not do so, because it seemed that his back was in two."

He died forty-five hours after the accident.

Notes of the post-mortem examination, by Dr. CRAIGMILE, *house-surgeon.*—There was a rent, four inches in length, in the left half of the diaphragm, involving about an equal part of the tendinous and of the muscular portions, and immediately to the left of the attachment of the pericardium to the diaphragm. Through this had passed (1) a portion of the left lobe of the liver, about three inches long and two and a half wide, the protruded portion being dark and showing a distinct line of constriction where it had been grasped by the edges of the rent in the diaphragm. This lay most anteriorly. Behind this lay (2) a portion of transverse colon, three inches long; and behind this (3) the whole stomach, dragging with it a portion of omentum which was grasped by the diaphragm. The stomach was dark and congested, but had not become gangrenous; it was filled with bile-stained, partly digested food, but contained no blood. The left lung was compressed into the upper part of the chest, and was about the size of two fists. The heart was pushed slightly towards the right side. The left pleural cavity contained three or four ounces of dark-coloured serous fluid. The right lung was greatly congested; the bronchial tubes, great and small, reddened, and full of mucus. The ribs were all uninjured. The injured hip was next examined. On cutting through the deep fascia, a considerable quantity of blood was found extravasated among the muscles surrounding the joint. Some irregularity and roughness were felt about the neck and great trochanter, but no crepitus or sign of fracture was caused by free movement of the joint; but in effecting the forced motions necessary for disarticulating and extruding the head of the bone a separation became manifest between the neck and trochanters. It was then apparent that the usual form of fracture in this region had occurred, and that the root of the neck of the femur had been so firmly implanted between the trochanters that only the violent strain put upon these parts in disarticulating the joint had succeeded in destroying the impaction.

Remarks.—This case well illustrates the value of the rule of not seeking for crepitus when fracture of the neck of the femur is suspected. The practice of seeking for crepitus, as Bryant points out, "is unnecessary, because the diagnosis of the case can be made without the help of such symptom; it is unjustifiable because, in cases of impacted fracture, the attempt to find it is often attended with irreparable mischief." It also illustrates a possible source of fallacy in making the diagnosis, the *slight* difference in measurement somewhat militating against the probability of fracture, until it was ascertained that the other limb had been previously the shorter.

Injuries of the diaphragm are generally difficult to recognise. The case recorded is interesting, as being one in which well-marked physical signs pointed pretty clearly to the lesion, especially when the absence of injury to the ribs and lung had been made out satisfactorily. The cause of death in these cases is stated to be generally collapse, pleurisy, or obstruction, or strangulation of some of the abdominal viscera. In the present instance the man died from gradual asphyxia, the lung on the injured side being gradually compressed, and the other lung being unable to bear the extra work thrown upon it.

DR. RICHARDSON has delivered at the Shoreditch Town-hall, under the auspices of the Guild of Learning, the first of a series of twelve lectures on Life and Health. Some persons, said the lecturer, imagined that life might be prolonged to 120 years, but he thought that it might fairly extend to ninety years. Life was an abstraction which, with our present knowledge, we could not deal with. Perfect health meant a condition in which the living body would go through its allotted cycle without suffering curtailment of natural existence or injury from the influences of external causes. When this condition of health was not attained, the body became subject to one or other of those changes to which the word "disease" was applied. Dr. Richardson concluded an able lecture by referring to the comparative length of life enjoyed by different classes of the community.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

THE first meeting this session of this Society took place on the 16th inst.; the President, Dr. Murchison, in the chair. The specimens exhibited were, with few exceptions, illustrative of diseases of the circulatory organs, many being shown by Dr. Wickham Legg. The chief subject discussed was that of the association of miliary aneurisms and cerebral hæmorrhage.

THE PRESIDENT, in opening the proceedings, laid upon the table the volume of the Transactions of the Society for the past year, the unusual extent of which had entailed considerable labour on the part of the medical secretary, Dr. Powell.

DR. WICKHAM LEGG showed a specimen of Aneurism of the Left Ventricle, from the body of a man thirty-eight years of age, who had served in the navy for eighteen years, but did not appear to have been the subject of syphilis. There was an aneurismal bulging of the wall of the left ventricle from weakening of the wall, due to the growth of firm white material semi-cartilaginous in consistency. This change existed in other parts of the heart-wall—*e. g.*, at the mitral ring, but it was most abundant where the aneurism had occurred. It was composed at its margins of granulation-cells imbedded in a finely fibrillar matrix, whilst in its central parts it was granular and structureless. It corresponded, in fact, to a gumma in structure; but in this case, as in a similar one recorded in St. Bartholomew's Hospital Reports, there was no further evidence in the body of syphilis, no trace of a chancre, and although there were some deep scars at the upper part of the right thigh, these were not in the line of the inguinal glands. The question of syphilis was not raised during life, but Dr. Legg brought the specimen forward in order to express a doubt as to whether it was right to dogmatise about the syphilitic nature of an isolated change like that.—Dr. DOWSE asked whether the smaller vessels of the brain were examined, and whether there was any atheroma present in the aorta or in the cerebral arteries.—Dr. LEGG, in reply, said that there was no more atheroma than was usually present in a man of the age of his patient. He added that he had found scanty atheromatous change in the aorta of a child of two years.

DR. LEGG then exhibited a specimen of Aneurism of the Anterior Cerebral Artery, from a young man twenty years of age, who was attacked with apoplexy after partaking of a meal when he had previously been almost starved. He was brought to St. Bartholomew's Hospital in an insensible condition, and died in sixteen hours from the seizure. There was extensive meningeal hæmorrhage, and an unruptured aneurism, the size of a hemp-seed, was detected on the anterior cerebral artery in the attempt to discover the source of the hæmorrhage. There was no cardiac hypertrophy, nor atheroma, nor renal disease. Dr. Macdowall had published a similar case in THE LANCET for 1875 (vol. ii., p. 202), where also the aneurism was entire. Such aneurisms are rare; for ten years ago Weber had been able to collect only six cases, but since then Dr. Gee and Dr. Greenfield (Pathol. Trans., vol. xxvii., p. 2) had each recorded one, and another, which Dr. Legg also exhibited to the meeting, was described in the St. Bartholomew's Hospital Reports. In reply to Dr. Hare, Dr. Legg stated that the source of the hæmorrhage could not be found; no other aneurism was met with in the meninges.—THE PRESIDENT said that in his paper on Intracranial Aneurisms, in St. Thomas's Hospital Reports, Dr. Peacock showed that in five out of six cases there was a history of syphilis, or some source of embolism was present.—Dr. LEGG said that no source for embolism occurred in his case, and there was no evidence of syphilis. About seven years ago Dr. Church had laid stress upon embolism as a factor in the production of cerebral aneurisms.

DR. THOMAS BARLOW brought forward a specimen of Miliary Aneurism of a branch of the Anterior Cerebral Artery. The patient, a man fifty-two years of age, with no

history of syphilis, but a great drinker, was admitted into Charing-cross Hospital with dyspeptic symptoms due to a receding scirrhus of the stomach. There was a slight trace of a previous attack of hemiplegia; whilst in the hospital he was seized with convulsions, and died comatose in twenty hours. A patch of yellow softening near the optic thalamus accounted for the old hemiplegia, whilst there existed also a recent clot, the size of a hazel-nut, on the white matter of the right anterior lobe, opposite to the root of the superior frontal convolution. In the centre of this clot a minute aneurism, the size of a hemp-seed, was found. It was connected with a very small branch of the anterior cerebral artery, and was ruptured. The vessel bearing it was also the seat of three other dilatations, and elsewhere in the pia mater some minute bodies (aneurisms of arterioles?) were seen. The arteries of the circle of Willis were atheromatous, the kidneys granular and contracted, and the heart hypertrophied. No possible source for embolism, except that of thrombosis in one of the atheromatous arteries, could be found; and Dr. Barlow thought it more likely that the aneurisms were formed from a primary change at their seat. He inquired whether these miliary aneurisms were not the chief factor in the majority of cerebral apoplexies, and urged careful search after local vascular changes before accepting all that had been said as to the effects of arterial tension in determining hæmorrhage.—Dr. POWELL mentioned that six years ago he showed at the Society for Dr. Quain a specimen showing a patch of minute aneurisms on cerebral vessels from a girl of about twenty years of age. The occurrence of the change in such young subjects rather bore out the view that it was a primary disease of the vessel—the view held by Charcot, who records several cases in young people. — Dr. FAGGE considered that in attributing all cerebral hæmorrhages to rupture of miliary aneurisms, Charcot and Bouchard had proved too much, and he could not understand their statement that the kidneys were healthy, or only slightly wasted, in all the cases of cerebral hæmorrhage they had seen. In Dr. Barlow's case there was a patch of yellow softening; and in many cases of cerebral hæmorrhage there was old softening in the neighbourhood of the apoplexy, and probably determining it. He would rather be disposed to think that rupture of the aneurisms was seldom itself the cause of hæmorrhage; even if they were found upon some vessels in the floor of a large mass of extravasated blood, it could not be said that the effusion was due to them. They occurred in infrequent sites, and not specially in the favourite seats of hæmorrhage. Dr. Goodhart had searched for them in cases of apoplexy, and had not found them.—Dr. GREENFIELD had seen several cases of cerebral hæmorrhage associated with miliary aneurisms. The last case he had observed was peculiar; the hæmorrhage proceeding from a small aneurism on the posterior cerebral artery seated in one of the sulci. The blood had forced its way through the white matter into the lateral ventricle. But he had failed to find these aneurisms at the usual seat of cerebral hæmorrhage, so that it was clear that other conditions than aneurism gave rise to the latter. In the cases in which aneurisms were present, the arterial change was peculiar; the vessels being rigid and patent, and somewhat translucent; not atheroma, but a special form of thickening in the outer coats—a change not limited to the arteries of the brain, but occurring in other organs. Regarding the production of aneurism from embolism, Dr. Greenfield thought that in such cases there was something peculiar in the condition of the clot giving rise to the emboli; for, in many cases of aneurism, no embolism existed.—Dr. COUPLAND inquired as to the state of the kidneys in those cases in which Dr. Greenfield described a change in the outer coats of the arteries which seemed to correspond to the "hyalin-fibroid" change of Sir W. Gull and Dr. Sutton.—Dr. GREENFIELD said that the kidneys were not specially diseased; the arterial changes were not limited to the brain—they occurred in the liver and kidneys also.—Dr. GOODHART, in reading over the account given by Charcot and Bouchard, thought that the arterial changes described were possibly the same as the "arterio-capillary fibrosis" of Sir W. Gull and Dr. Sutton, and this seemed to be borne out by what had fallen from Dr. Greenfield. In cases in which embolism was followed by the formation of an aneurism the clot was peculiar—generally a septic clot; for in a large number of cases embolism did not produce aneurism. Dr. Goodhart showed a drawing illustrating inflammatory changes in the external wall of an artery secondary to embolism.—The PRESIDENT said that it was generally conceded that whenever a cerebral apoplexy occurred there was disease of the coats of the vessels sufficient to give rise to their rupture, without seeking for aneurisms. He commented on the fact that a large number of cases of hæmorrhage in young people were due to aneurism; this had been pointed out by Dr. Peacock, and supported the view that in Dr. Legg's case the source of the hæmorrhage was from another aneurism.

Dr. LEGG then showed specimens illustrating the formation of Free Balls of Fibrin in the Left Auricle in cases of Mitral Stenosis. One was from the body of a young man, twenty-five years of age, who was found dead, and on opening the left auricle, two round balls of fibrin were found lying loose in the cavity of the left auricle; one of them lodged in the mitral orifice, which was stenosed. Probably they arose from the detachment of clots formed in a pulmonary vein, and, being unable to pass through the narrowed mitral orifice, had received fresh deposit of fibrin. It was only to be wondered at that sudden death did not occur before. Another specimen, now in St. Bartholomew's Hospital museum, showed a perfectly spherical mass, the size of a billiard-ball, which was contained in the left auricle. There was mitral stenosis, and death had taken place slowly. There was no clot in the appendix, but there were pulmonary infarctions, which might have served as sources of clots in the pulmonary veins. Dr. Legg referred also to a specimen in the museum of St. George's Hospital (recorded by Dr. J. W. Ogle, in vol. xiv. of the Transactions); and to a similar specimen in the museum of St. Thomas's Hospital.—The PRESIDENT said that many years ago Dr. Van der Byl showed to the Society a similar specimen, which was, he thought, now in the museum of the Middlesex Hospital.—Dr. FAGGE said that sudden death occurred either from the clot completely obstructing the blood-flow, or from the clot softening in the centre and becoming disintegrated.

Dr. EWART exhibited a specimen of Ante-mortem Coagulation in the Left Auricle, in which that cavity was almost entirely filled by the clot, only a small channel being left for the passage of blood. The clot elsewhere was adherent to the endocardial surface, so that on incising the auricle some of the grumous fluid contents of the disintegrated coagulum escaped. The case was one of mitral and tricuspid stenosis in a woman thirty-seven years of age, who had suffered from rheumatic fever at the ages of twenty-one and twenty-six, and had had symptoms of heart disease for two years before death. Five days before death there was progressively increasing cyanosis and dyspnœa, which became intense; and Dr. Ewart thought that the coagulation had begun in the cavity and gradually proceeded upwards towards the pulmonary veins.

Dr. LEGG showed an example of Complete Obliteration of the Aorta, at the usual site—viz., just in the neighbourhood of the ductus arteriosus. The subject of it was an adult who had died suddenly from rupture of a dissecting aneurism of the aorta into the pericardium. The vessel was completely obliterated for about a quarter of an inch just beyond the ductus arteriosus, which persisted as a ligamentous cord pervious for a short distance to a bristle. The circulation was carried on by the anastomoses between the internal mammary and other branches of the subclavian with the epigastric and intercostal vessels. Dr. Legg believed that as many as eighty such cases had been recorded, and he referred to the two existing theories as to the mode of origin of the constriction. The one view is that it depends upon some condition of the ductus arteriosus, and the case of a child is recorded in which a thrombus was found extending from the ductus into the aorta. The other view—that of Rokitansky and Peacock—is that it is dependent rather upon an original vice of development, and Dr. Peacock had shown that it frequently went with other malformations, such as deficiency in the ventricular septum, or the presence of only two aortic valves, as in the specimen exhibited.—Dr. COUPLAND mentioned a case recently in the Middlesex Hospital, under the care of Dr. Thompson, in which this condition was marked during life by extremely tortuous and dilated arteries in the scapular and interscapular regions, having the characters of cirsoid aneurisms. In this case the co-

clusion was not quite complete, but the anastomoses were very abundant, the upper intercostal arteries being of great size and very tortuous. Dr. Coupland referred to a case related by Mr. Sydney Jones, in which the anoastmoses were carefully dissected and described.—Mr. SYDNEY JONES said the preparation from that case, which he had brought before the Society twenty years ago (see Transactions, vol. viii., p. 159), was in the museum of St. Thomas's Hospital. It occurred in a dissecting-room subject, a man of the age of forty-five, and he was enabled to make a complete dissection of it. In his paper he expressed concurrence in the view adopted by Dr. Craigie that "the obliterating action, which has taken place in the ductus arteriosus, has, from some cause or other, been prolonged within the aorta."—Mr. WAGSTAFFE asked Dr. Coupland whether the physical signs were sufficient to render a diagnosis possible, to which the latter replied in the affirmative, adding that he believed the condition had been diagnosed.—Dr. LEGG said that Oppolzer had made the diagnosis in five or six cases, basing it chiefly upon the absence of an aortic pulse in the abdomen, and the presence of the anastomoses.—Dr. FAGGE reminded the members that Dr. Walshe had correctly diagnosed a similar case, laying stress upon peculiar murmurs in the back.

Mr. CHRISTOPHER HEATH related the conclusion of the case of Cystic-Oxide Calculi, which he had brought before the Society two years ago (See Trans. xxvii., p. 306); and he exhibited two masses of cystine removed from the bladder after death. The patient was a man twenty-eight years of age, from whom Mr. Heath removed seventeen or eighteen calculi by lithotomy two years ago. Death, which recently occurred, was due to acute cystitis; a mass of cystic oxide was found in the bladder, and in each ureter there was a small conical mass of cystine. The calculi removed post-mortem were softer and more friable than those which had been removed by operation.—The PRESIDENT asked if any other member of the family suffered from calculus.—Mr. HEATH replied in the negative; and further, in reply to Dr. Hare, said that the cystine was always found whenver the urine was examined.—The PRESIDENT had had a patient under observation for twenty-five years who passes cystic-oxide calculi in the urine.—Dr. HARE said, that in no case had he ever found it disappear from the urine, under any circumstances or any treatment.

Dr. PEARSON IRVINE showed a specimen of Destructive Pneumonia from Pressure on the Bronchus. The patient, who suffered at first from hoarseness, shortness of breath, and pain between the shoulders, was found to be suffering from an aneurism of the ascending part of the arch of the aorta; and whilst under observation there were physical signs of increasing consolidation of the left lung, the left side of the chest becoming absolutely dull on percussion except at the extreme apex. The man dying suddenly in July (six months after first symptoms appeared), a saccular aneurism of the ascending aorta was found, which had compressed the trachea and the left bronchus to such an extent as to cause ulceration of the cartilages of the latter. The lung itself, also compressed by the aneurism, was of large size, covered by a thickened pleura, and riddled with cavities from apex to base, the cavities being filled with reddish grumous fluid. The right lung was in a condition of compensatory emphysema. Dr. Irvine said the condition was similar to that in a like specimen which he had brought forward last year, and he thought sufficient attention had not been given to the mechanism of the process. The change had been attributed to pressure on the nerves; but it seemed more reasonable to suppose that it was due to the accumulation of air and secretion within the lung, the narrowing of the bronchus preventing the exit of the accumulated material. In both his cases the aneurism was empty, and possibly more pressure was exerted by it than by one filled with clot. He believed the changes in the lung shown by Dr. Pye-Smith last year from a case of syphilis were of the same nature, being secondary to a syphilitic contraction of the bronchus. In answer to the President, Dr. Irvine said the contents of the cavities were disintegrated blood and pus cells.—Dr. BARLOW had found a similar but more chronic and advanced change in the lung of a child whose bronchus became ulcerated by the impaction of a pea within it. In that case there could have been no question of any pressure upon the vagus nerve.—Dr. GREENFIELD said that no doubt these changes were due to retained secretions. He had seen the same thing in cases of syphilitic ulceration of the trachea and bronchus, tumours pressing on a bronchus, and cases of foreign bodies impacted within the air-passages. The accumulated secretions in the small bronchi set up a chronic ulcerative process.

The meeting then adjourned.

CLINICAL SOCIETY OF LONDON.

THE first meeting of this Society for the session was held on Friday, Oct. 12th; Mr. Callender, F.R.S., President, in the chair. The use of the carbolised catgut ligature for the deligation of arteries in their continuity, and the treatment of pleurisy by thoracentesis, were the subjects under discussion.

Mr. BRYANT exhibited specimens and drawings of arteries from four cases of Ligature with Carbolised Catgut. The first preparation was from a man twenty-nine years of age, who died from heart disease fourteen hours after ligature of the external iliac for an aneurism of the right common femoral artery. The ligature used was of medium size, and no more force was employed than was necessary to secure the vessel. At the autopsy the internal and middle coats of the vessel were found to have been divided, whilst the external also was partly divided, some clots being found both above and below, and the catgut intact. The second preparation and drawing showed the right common carotid artery, to which a ligature had been applied twelve days before death, in a man fifty-eight years of age, for a supposed aneurism of the aorta and innominate artery. The operation was performed on the 16th of January, 1877, with carbolised catgut. It was followed by considerable relief of the pain, but the patient died from exhaustion on Jan. 28th. The artery was found to have been completely divided as to all its coats, and there was a firm clot both above and below the seat of ligature. The ligature itself had entirely disappeared. The third preparation was from the right subclavian artery of a man thirty-six years of age, who was admitted into hospital suffering from a ruptured traumatic axillary aneurism. He died from pulmonary complications on the thirteenth day from the operation. There was no suppuration about the operation wound; the subclavian artery and vein were normal. A small firm clot existed for half an inch above and a similar distance below the point of ligature. All the coats of the vessel were divided completely, and only the knot of the ligature remained. The fourth specimen was from the common femoral of a young woman, twenty-three years of age, in whom the artery was ligatured for elephantiasis Arabum. She died on the nineteenth day from the effects of gangrene of the leg. All the coats of the vessel were completely divided and repaired, there were good clots above and below the seat of ligature, and a small knot was found attached to the artery. Thus, in all four cases, the inner and middle coats of the artery were found to be divided, and in one case the outer coat also. The complete division was, no doubt, the result of secondary ulceration. In its primary effects, therefore, Mr. Bryant remarked, the carbolised catgut ligature acted as an ordinary ligature, and caused also a more or less complete secondary ulcerative action. He had ligatured ten other large arteries in their continuity—five femoral, four external iliac, and one subclavian. One case died on the tenth day. In one femoral the wound united without any suppuration, and the patient did not know that any cutting operation had been performed until he saw the scar on the seventh day, so slight was the reaction. In none of the cases did he use the spray, but dressed with dry lint or water dressing. One case died on the fourteenth day of pyæmia and heart disease. Secondary hæmorrhage occurred in two cases; in one of subclavian it was slight, and the wound healed on the twenty-third day. In one out of four of external iliac there was some slight secondary hæmorrhage on the twenty-ninth day. Whilst he could not agree with the views enunciated by Professor Lister as to the mode of action of the catgut ligature, his con-

clusion was that it is the best which we have at our disposal. — The PRESIDENT inquired as to the date at which the secondary hæmorrhage occurred in the two cases mentioned.—Mr. BRYANT, in reply, stated that it was on the fourth and the twenty-ninth days respectively.—Mr. MAUNDER observed that Mr. Lister advocated the use of carbolised silk nine or ten years ago, and he had used it with good results; then he substituted catgut. He himself had had nine cases of the operation with carbolised ligatures, only five with catgut. So far as his own experience had gone, the use of the carbolised catgut had been attended with good results. One femoral case healed with no suppuration, another suppurated freely. But the experience of others had not been so satisfactory, and in some cases the results had been disastrous. Such cases as those of Mr. T. Smith, Mr. Callender, and others, and that of Mr. Spence, in which the catgut dissolved very speedily, led him to the conclusion that the femoral should not be tied with the catgut. He himself would never use catgut again, seeing that it involved risks peculiar to itself and never associated with silk. — Mr. BARWELL said that his experience, derived from the ligature in five cases with catgut, led him to agree with Mr. Bryant, for no accident had resulted in any case. It was a mistake to use too much force in tying the ligature, and the ends should not be cut too short. The condition of the catgut was also of importance; if left too long in the carbolised oil it became brittle. He believed that the secondary hæmorrhage in femoral cases was from the vein and not from the artery.—Mr. SYDNEY JONES inquired as to the age of the patient in whom the carotid was ligatured, and the condition of the vessels. As to the time of absorption of carbolised catgut ligature, he thought it was slow, for he had found that after tying small vessels with such ligature in excision of the breast the sinuses remained long open.—Mr. BRYANT, in reply, stated that the patient was twenty-nine years of age, and the arteries very healthy. In one case the knot of the ligature was found adherent on the nineteenth day, in the other on the fourteenth. He believed that the catgut ligature divided the coats in the same way as any other ligature, whipcord or silk, but that secondary ulceration did not necessarily occur, and this was an advantage. He agreed with Mr. Barwell as to the importance of not drawing the ligature too tight.—The PRESIDENT stated that each of the cases in St. Bartholomew's was a case of aneurism, in which the vessels were ligatured in their continuity for the cure of the aneurism. In each of three cases the ligature appeared to give way in a few hours, and pulsation recurred in the aneurism.

Dr. G. H. EVANS read notes of some recent cases of Pleuritic Effusion treated by Paracentesis Thoracis. The first was that of a groom, twenty-three years of age, admitted to Middlesex Hospital on April 24th, 1877. He had had previous good health; but was attacked, three weeks before admission, with symptoms of acute pleurisy. On admission, there were the ordinary signs of large effusion in the right pleural cavity. Paracentesis was performed on April 26th. Seventy-two ounces of clear serum were removed; rapid improvement followed, and the patient was discharged on May 18th, apparently cured. The second case was that of a man twenty-nine years of age, who, after an illness of apparently some months' duration, was admitted on Sept. 6th, with the left pleural cavity, as shown by the physical signs, almost full of fluid, and the heart much displaced to the right. Thirty-five ounces of fluid were removed by paracentesis on Sept. 7th, and the patient was discharged on Sept. 26th in good health and cured. The third was that of a man thirty-two years of age, admitted on May 24th, with left pleuritic effusion, the temperature being normal. Paracentesis being performed, fifteen ounces of clear serum were slowly removed. But the effusion recurred and increased till it again nearly filled the left chest, and on June 9th, fifty-five ounces of clear serum were drawn off by syphon action. After the operation, the lung appeared to have expanded, and respiratory sounds were heard all over the back. But again the chest completely filled, and the physical signs became as before. On August 27th, fifty-five ounces of clear serum were removed, and rapid improvement followed. The temperature throughout was normal, except during an attack of sore-throat. Dr. Evans said that his reason for bringing these cases forward was that he had been surprised to hear and read observations deprecating the operation. In many cases no doubt reabsorption occurred without paracentesis. The old view of the danger of the entry of air was, he thought, exploded; and, on the other hand, pus-formation might occur if an ordinary serous pleurisy were left alone. But the greater rapidity of cure after successful paracentesis was an important consideration in many cases.—Dr. CAYLEY observed that another reason why the operation should be performed was that it diminished the chances of tuberculosis. In children the tuberculosis usually attacked the opposite lung first, and he believed this to be due to the protracted hyperæmia which resulted from the stress thrown upon the one lung. —Dr. C. T. WILLIAMS agreed as to the advantages of early aspiration, but mentioned cases where absorption had occurred slowly or rapidly when the operation was not performed. He had never seen any evil result from aspiration.—Dr. SOUTHEY thought that whilst no one would question the need of operative interference when the fluid was purulent, there was yet needed some clinical symptomatic guide as to the time of operation in serous effusion. The indications which guided him to operate were anxiety of the patient, rapid breathing, great displacement of viscera, hectic fever, and diminution of urine. He did not remove all the fluid, and preferred a fine trocar with a tube under water to the aspirator.—Dr. JAMES POLLOCK said that his usual practice was to wait a month, and then, if signs of pressure existed, he drew off the fluid. He used by preference an elastic tube, and allowed as much fluid to run off as would flow with ease. He had only had one unsuccessful hospital case. One disadvantage of waiting too long before operating was that the affected lung might not expand if bound down by adhesion, and another was that the unaffected lung might become tubercular. — Dr. GOODHART agreed that it was usually the unaffected lung which became tubercular, and attributed it to hyperæmia, and to the collapsed condition of the other lung.—Mr. G. BROWN thought, as the result of his experience, that when serous effusion in children was tapped early the result was usually good.—Dr. LEES was glad to find that early tapping was approved. He mentioned the case of a boy whose chest was full of fluid; it was allowed to remain a month, and then seven ounces of clear fluid were removed. Another five and a half weeks were allowed to elapse, and then again he was tapped. Hectic fever, with a temperature from 99° to 102° F., having existed, it was supposed that pus would be found, but clear serum alone was drawn off. The case showed that tapping did not of necessity cause a purulent condition of the fluid. Ultimately adhesions occurred all over the lung.—Dr. EVANS, in reply, observed that he was fully alive to the danger of tuberculosis of the opposite lung, and he had on that account refused to allow the affected side to be strapped when pain occurred. As to the advantage of early tapping he mentioned another case, in which he had removed sixty-six ounces of fluid, which was rapidly effused, and complete cure resulted in less than a month. He did not exhaust the chest; this, he believed, was entirely avoided by the use of the syphon.

The meeting then adjourned.

ON DAVOS AS A HEALTH RESORT.

BY DR. CLIFFORD ALLBUTT.

FEW physicians are there, probably none among those whose hearts are in their work, who have not sought, even longed with a desire almost passionate, to read the terrible secret of Consumption, a malady which strikes the fairest and most precious lives, and but rarely strikes in vain. Happily, it is as true of phthisis as it is of most other maladies, that modern medicine has thrown a flood of light upon its modes and causes, and thus contributed to a revelation of knowledge only equalled in kind by the splendid energy of Greek civilisation six hundred years before Christ, and never equalled in degree and rapidity of achievement in the history of the world.

It is a remarkable instance among many of the waste which

is inherent in earthly progress that the great discoveries of Laennec, when their work was done, began to exercise a retarding influence upon the interpretation of the nature of phthisis, so that the very accuracy thus gained paralysed the physician who, foreseeing in the earlier stages of the disease the development of the later, condemned many sufferers to death to whom their less enlightened predecessors would have spoken more hopefully. Thus it was that the stricter disciples of the master became almost fatalists in their prognostics. Twenty years ago I well remember phthisis was so generally regarded as due to a quasi-malignant growth that I, who had then studied Broussais to my great advantage, was regarded as a pestilent and foolish heretic when I ventured to contend, from pathological and clinical facts, that phthisis is, in many cases at least, an inflammatory disease, and that caseous masses in the lungs do not spring up casually. My publication of such opinions in the *Medico-Chirurgical Review* for 1861 was even gravely rebuked by more than one person as a wrong-headed speculation. Nevertheless for fifteen years past I have taught at Leeds that phthisis is in many cases an unhealed ulcer or cold abscess, incurable chiefly because we cannot or dare not get at it, and that, although there is such a thing as tubercle, this thing is in many cases absent, or is a secondary product. The opinion, however, that tubercle, when it did come, was something foreign and semi-malignant, and that tubercular phthisis meant incurable phthisis, still held its ground in my mind, as in every other, until we were shaken even in this opinion by the tubercular results of septic inoculation in animals. Our threatened dogmas were, however, once more fortified by the vigorous restatement of them of Niemeyer. Still their renewed vigour in this form was but temporary, for although Dr. Andrew Clark somewhat surprised many of us by giving us the old wine in the old bottles at the Manchester meeting when he again asserted the division of common phthisis into the tubercular and the non-tubercular, yet most physicians now feel that room must be made for some broader view than this, and that neither on clinical nor pathological grounds can the real distinctness of these two forms of phthisis be any longer taught with precision. But herein is no mere oscillation between the fashions of hypotheses. On the contrary, having divided and examined we must now put together again. We have found by such analysis that tubercle is not a foreign growth springing from morbific seeds hereditary in the constitution, but that it is a ready extension of native elements—that it is, in fact, the bubo of the sore, as enlarged glands in the neck are bubos secondary to sores in the throat, ears and elsewhere; which latter are sometimes strictly adenoid or tubercular, sometimes purulent, and very often of both kinds. As in some persons, in some situations and under some circumstances, a carbuncle or whitlow excites, and rapidly excites, lymphatic bubos with continued fever, or, on the other hand, excites phlebitis or common septicæmia with remittent fever, so in some constitutions a poisoning lesion, either in the lung or far away from it, may set up extensive bubonic change, in the shape of massive or miliary tubercle, or may rather, as common septicæmia, kill the patient with rigors and remittent or so-called hectic fever. Confining ourselves to sores in the lungs, probably no phthisis—no pulmonary lesion—fails to set up some action of a bubonic, adenitic or tubercular character, by whatever name it be called, but in some cases this secondary result bears a far larger proportion to the whole than in others. In some cases or constitutions the adenoid accidents are overwhelming in extent and intensity, in others local ulcerations with chronic septicæmia are the chief features, but neither nature nor nomenclature can draw a line between the two forms which in both essence and accident are identical.

Let us, then, grasp this result as firmly as we can; for it is full of hope for us that, setting aside cases of general tuberculosis arising from extra-pulmonary sources of poison, and confining ourselves to the lung, we find first a lesion, and from this lesion come secondary consequences, of which two invariable ones are, to speak colloquially, bubos and blood-poisoning—i. e., tubercle and septic or hectic fever. We can no more assert that one is curable and the other incurable—the one general and the other special—than we can assert the same of a whitlow with enlargement of the axillary glands and a whitlow without it. Within the last twelve months I have seen two cases of carbuncle which diverged as follows: The first patient became secondarily affected in axillary, subclavicular, and other glands, and has now become a "scrofulous" subject, the originating sore being long ago healed; the other developed secondary abscesses, and died in a few weeks of septicæmia of the ordinary kind. So it is with tubercular and common phthisis. In phthisis, as in all other diseases, although chance remedies may in rare cases be hit upon, a genuine curative *method* must depend upon a close insight into cause and effect—into primary causes, into subsidiary causes or conditions, and into the products of these factors severally and together. If, then, phthisis be a disease in which a primary lesion generates blood-poison, and this poison is found to set up adenoid and septic poisoning, the treatment must, putting it briefly, be antiseptic. The radical treatment of phthisis pulmonalis would, therefore, unquestionably be to cut down upon the ulcers or abscesses, and to cleanse and drain them. We might thus hope to dry up the poison at its source, when, as unquestionably, the results of it would tend to subside, unless so far gone as to amount to substantial mischief in themselves. Analogy would lead us to expect what practice shows us—namely, that simple septic fever would cease at once when the source of the poison is cut off, for it cannot be too earnestly impressed upon all physicians that septicæmia is, as a rule, a daily cycle, not the result of one, but of repeated absorptions; that, in fact, it is a disease bringing about its own daily cure, but day after day reproduced. Cleanse the uterus, cleanse the vomica, drain the empyema, wash the stump, open the abscess, sponge out the peritoneum, syringe the ears, swab the throat—in a word, remove or disinfect the poison at its source,—and in nine cases out of ten the hectic fever will cease within twenty-four hours, not to return. Adenoid poisoning is, however, a more stable consequence, and one not laid so readily. We know that the "scrofulous glands," nearly always due to disease of mucous membranes somewhere, will rapidly fall in some cases when the primary cause is removed, but too often they have made a self-sufficient footing for themselves, and may either recede more gradually or may become not only serious in themselves, but a fresh source of pollution beyond. Even in these cases we know how successful aseptic and antiseptic remedies may prove, whether surgical, medical, or climatic. I repeat, then, the fundamental treatment of phthisis, whether it be more or be less adenoid or tubercular in its development, is antiseptic or aseptic; and here we come to the very heart of the matter. Keep up the general health no doubt, give cod oil, suet dumplings, white snails, or what you please, your radical *cure* after all must be antisepsis. Well, I suppose we cannot yet reach the local sores, and perhaps we never shall do, though I confess in cases of hectic fever arising from a few superficial cavities I have often been sorely tempted to try, for in such cases the cause of death, whatever we may call it in the certificate, is Chronic Septicæmia.

The next hope seems to lie in some inhalation plan, or in some filtering of the respired air, but here one meets with much disappointment. It may be that inhalations do not reach the part, or that their action should be quite continuous. Can we then, in default of success with inhalations, and with respirators, put the patient into a permanently aseptic atmosphere? If into a natural atmosphere so much the better. We have learnt much of late concerning the septic contents of atmospheres, and we know that in towns and foul dwellings or workrooms an aseptic atmosphere cannot be found. We carry, then, our test infusions into the country and away from hay chambers, &c., and there we find them more steadfast, and more steadfast out of doors than within. The higher we carry them the steadier they are, and at an elevation of 5000 feet they positively may remain unchanged for weeks, unless purposely infected. At Davos meat when hung up does not putrefy, but is thus dried and kept for use, and test infusions remain stable for long periods (Waters, loc. cit.). Nor do the lungs there rot in the living man. Catarrhs and pneumonic inflammations are common enough, but the morbid secretions do not foul, and phthisis is therefore unknown. I was so struck with this matter, both in its theoretical and practical aspects, that I made it my business this summer to go to Davos, and there inquire into the statements published in the German periodicals. I found, moreover, that although the Swiss and German patients are many at Davos,

numbering about six hundred, even in winter, yet but few English winter there, although their number has increased in the last three years from seven or eight to twenty or thirty. I remained about four days at Davos, and spent the whole of my time in these special inquiries. My own observations were of some value, perhaps, but my information was chiefly derived from conversing with many patients, from long and careful discussions with Drs. Unger and Rüdi, and from reading two pamphlets, the one by Dr. Ramann on "Davos as a 'Cure-place' for Phthisis," and the other "On the Meteorology of Davos," by Mr. Waters. Dr. Unger and Dr. Rüdi showed me much kindness, and I cannot thank them too much for the excellent information which they supplied to me. Dr. Unger has lived twelve years in Davos, was himself consumptive, and found his cure there. He may be called the discoverer of Davos; as I believe he and his friend Herr Richter, of Basle, then phthisical like himself, were the first to settle there for the purpose of cure. Herr Richter is now the bookseller of Davos, and is in sound health. It is curious to find that many of the foreign settlers in Davos are cured "poitrinaires." Herr Cöster, the stout-looking and energetic landlord of the Belvidere, found his cure at Davos, and so did several of his servants. I was at first sight struck by two things chiefly: first, by the apparent absence of invalids; and, secondly, by the real absence of medical machinery. Knowing as I did that most of the visitors had come to Davos for their health's sake, and knowing but too well the aspect of the population of other well-known resorts for the phthisical, my first question was, Where are the patients? Round the table, with few exceptions, one saw ruddy faces, and heard cheerful voices only muffled by the needs of vigorous appetites. Indeed the patients ate so much it was difficult sometimes to secure a due share of good things for one's self. Yet when Dr. Rüdi sat next to me at dinner on the following evening he could tell me how this person had a cavity at one apex and infiltration of the other; how a second had come to Davos apparently but to die; how a third had come with lungs breaking down, had been cured and had left Davos, but had again succumbed to renewed disease, and was now once more in the way of complete recovery; and so forth. Yet perhaps not one of these, unless of the quite new comers, was absent from the pleasure excursions of the day, or was leading the life of an invalid. Those who frequent "cure-places" abroad, or at home for that matter, will best understand my surprise at the absence of pretentious cure systems, and of all the machinery of quackery. There is a mineral spring at Davos, but no one is ever asked to drink at the fountain; there are no mud-baths, no pine-baths, no elaborate regulation of food, or habits of life. Some use is made of the cold douche, but with this exception, the doctors seem to say to the patients: It is the air which is to be your cure; you need some careful watching by us at first, but you need little or no medicine, and no laborious trifling with other means. Eat and drink pretty much what you like; beware of sudden changes of temperature, but live otherwise as much in the open air as you can. This candid simple system is due, no doubt, to the candour and simplicity of the physicians of the place. Nothing could inspire more confidence in the inquirer than the definite, cautious, and perfectly disinterested tone of both Dr. Unger and Dr. Rüdi, to whose statements I shall have occasion to return.

(To be concluded.)

THE ADVANTAGES AND OPPORTUNITIES OF FOREIGN STUDY.

THOSE times in which it was impossible to obtain any adequate or scientific training in medicine in the United Kingdom are happily long past, and to-day a medical practitioner may have completed his education in one British medical school without incurring the imputation of any want of proper finish to his studies. It is still the custom, however—and a very good custom it is,—for those who have the leisure and the wherewithal, and especially for students of the higher branches of the profession, to travel abroad for a time, and try to glean from foreign schools whatever they may find worthy of being taught. That astute physician and man of the world, Dr. Radcliffe, the physician of William and Mary and Queen Anne, was so impressed with the advantages of foreign travel that he bequeathed to University College, Oxford, an estate in Yorkshire, charged with the payment of £600 per annum, to "two persons to be chosen out of the University of Oxford, when they are Masters of Arts and entered on the physic line, for the maintenance of the said two persons for the space of ten years and no longer, the half of which time at least they are to travel beyond the sea for this better improvement." Radcliffe's intention evidently was that his travelling fellows should settle for a considerable period at one or more of the foreign universities, and there acquire a thoroughly sound and perhaps an entire knowledge of medicine, a knowledge which in his day was not to be got in England. At the present day there are three fellows instead of two, and the reduced fellowships are tenable only for three years each, provided the holder spend at least eighteen months of the time abroad. The object of the modern Travelling Fellowship seems to be to enable a man to enlarge his views, and to finish his education by taking advantage of the various opportunities offered by the different continental universities. With the objects of the travelling fellowships we most cordially concur, and we would urge all students, if possible, to put a coping-stone to their education by spending a year or so in visiting one or more of the European schools of medicine.

Every man should receive his medical training in the country in which he is going to practise, otherwise he will hardly succeed in properly understanding the constitution and habits of the patients, both rich and poor, among whom his life will be spent. No man should visit a foreign university until he has completed his education in this country, or, at least, before he has reached the penultimate stage of his curriculum. The more experience a man can take abroad *with* him the more will he profit by his new foreign experiences. Those who are studying at the universities should at least possess the degree of M.B., and those who are not university men should at least have gained one diploma before thinking of travelling abroad. It will be well also for the traveller to have had the experience afforded by residence in a large hospital either as a medical or a surgical officer. He may take it for granted that no experience he is likely to gain abroad is half so valuable as that which he will obtain by holding a responsible and important office either in a metropolitan or provincial hospital. There is no more unsatisfactory being than the man who has glossed over his native ignorance by acquiring a parrot-like knowledge of foreign teaching, which, being without the power of criticism, he has swallowed whole and failed utterly to digest. The earnest student should endeavour thoroughly to thresh out every grain of knowledge contained in the home granaries before he seeks "fresh fields and pastures new." To go abroad to learn rudiments is a mere waste of time and money, and there is no excuse for any student who has been educated even at a second-rate English school if he be not able to prepare and mount microscopic sections, to perform with more or less ability all the operations which are taught upon the dead subject, and to use with some dexterity the various instruments of clinical research. If the student travel with one particular object in view, he will of course have made up his mind before starting how that object may best be carried out. If he intends to devote his attention to one particular subject, with a view to teaching or to special practice in the future, he will go direct to the spot where his special information is best obtained. To such an one we can offer no advice, but we feel that a few hints to students who are going abroad for the sake of general improvement may not be unacceptable.

The first object is to learn the language in which one is to be taught, and, if not already conversant with French and German, the student should devote all his energies to conquering the difficulties of these languages. The more he learns before starting the more he will profit by his travels. The best way to learn a language is to place oneself where there is no escape from it. Always carry a dictionary in the pocket (and for French there is nothing better than Bellows's admirable pocket dictionary), and take every opportunity of hearing the language spoken and of speaking it. Lecture-rooms, theatres, churches, and *tables d'hôte*, are the best schools for modern languages, and these, added to

companionship and the help of a master will soon give a thorough knowledge to him who really tries to learn. For the purpose of learning a foreign tongue it is advisable for the Englishman to go first to some town where he is not likely to hear too much of his own language. At Paris, Berlin, and Vienna there are swarms of British and American students, and should the traveller, which is far from unlikely, contract a friendship among them, his chances of learning French or German are immensely diminished. The temptation to visit any of the provincial medical schools in France is not very great, although the Faculty of Medicine in Lyons is decidedly in the ascendant, and the aspiring surgeon would do well to attend the course of operative surgery under the direction of Léon Trepier. In Germany, on the other hand, many of the smaller schools are well worth visiting, and we should advise a visit to Würzburg or Halle, for example, before proceeding to Berlin or Vienna.

We have no intention of giving any precise directions as to what course a student is to pursue at a foreign school. He will follow the bent of his own inclinations in a great measure, and if he be well grounded in professional knowledge, he is not likely to err in making a selection from among the numerous cliniques and lectures which will be open to him. It will be well for him to have at starting some settled plan of operations, and he should be careful not to waste his time in a *dilettante* attention to too many things. He should leave himself open to glance as it were at everything, but at each seat of medical learning he should select one or more subjects to which to devote particular attention. In Paris, everything is freely open to all the world, and the student is not required to pay any fees. At the present day the chief attractions are the surgical teaching of Verneuil and the clinique of M. Charcot. Ranvier has also a great reputation as a teacher of pathological histology, and the opportunities of studying Anatomy or operative surgery are unusually good owing to the plentiful supply of material. There is scarcely a Professor attached to the Faculty of Medicine in Paris whose name is not well and favourably known in this country, and he who stops here six months in a year will find the time all too short. In Berlin there is one attraction which is pre-eminent, and that is the Pathological Institute, under the direction of Prof. Virchow. This institute is complete in itself, and within its walls the student can most thoroughly study morbid processes—macroscopically, microscopically, and chemically. Here demonstrations are given by the eminent Professor, and post-mortem examinations are made under his immediate superintendence. Some few years ago it was no easy matter to secure a place in the histological laboratory; so great was the competition for that privilege. Although Virchow is, perhaps, the chief, he is by no means the sole attraction of the Berlin school, and we have only to mention the names of Von Langenbeck, Bardeleben, Frerichs, Du Bois-Reymond, Schröder, and Oscar Liebreich, to assure the intending visitor that he will find infinite opportunities for enlarging his mind in the domains of clinical medicine and surgery, physiology, obstetrics, and therapeutics.

Vienna is the great school for instruction in special subjects, and whether the student be seeking to increase his knowledge in medicine, surgery, gynæcology, dermatology, syphilology, laryngoscopy, ophthalmology, electrotherapy, otology, psychology and psychiatry, epidemiology, embryology, toxicology, diseases of the nose, diseases of children, diseases of the nervous system, or diseases of the genito-urinary organs, he will find at least one, and in some cases two or more professors anxious to give him every information in their power on any of these subjects. The best known names in Vienna are probably Billroth, the professor of surgery; Carl Braun and Späth, the gynæcologists; Hebra, the greatest living authority on diseases of the skin; Sigmund, the syphilographer; and Stricker, the histologist. For the student who has several years available for travelling, there are many seats of medical learning besides those which we have mentioned. Germany has a score of universities, in each of which there is at least one professor whose name has become a household word, and the student, who has definite objects of special study, will find masters of reputation at Leipzig, Bonn, Heidelberg, Strasburg, Kiel, Munich, Würzburg, and elsewhere. The student who travels should lay himself open to receive all those impressions of men and manners which must strike a wanderer in a strange country. If, as is probably the case, he has been working very hard at home, and has been directing his gaze solely towards medical objects, now is the time to enlarge the field of his vision and to devote a part of his attention to other matters. We should not advise him to read or work at examination pressure. All clinical instruction abroad is given in the early morning, and the student generally has a great part of the day to himself. This he should utilise in seeing every noteworthy object, in visiting art collections, and in making excursions to places which are interesting from their historic associations or natural features. Above all we should advise him to seize every opportunity of visiting and noticing the chief points in bathing and health resorts. Let medicine be his chief aim; but let it not occupy his thoughts to the exclusion of everything else, otherwise he might as well have remained at home and have been content to read those wonderful *Jahresberichte* in which is condensed everything that everybody everywhere has to teach.

Analytical Records.

LA BOURBOULE, SOURCE CHOUSSY, PUY DE DOME.

(INGRAM AND CO., 119, QUEEN VICTORIA STREET, E.C.)

This water, which was noticed a few weeks ago in our columns, is remarkable for the large quantity of arsenic it contains—larger, it is said, than is found in any other mineral water. It also contains a somewhat large amount of alkaline chlorides and carbonates. The water is a pleasant one, and will be used with advantage in cases where the administration of arsenic is desirable.

BRANSON'S COFFEE EXTRACT.

(W. P. BRANSON, 155, PENCHURCH-STREET.)

Mr. Branson has produced a coffee extract which is in all respects so excellent that it can hardly fail to take a high place in public favour. It appears to be thoroughly genuine, and has the true coffee taste and aroma. We have tried it both as *café au lait* and as *café noir*, and in the latter form have seen it handed round after dinner without anyone suspecting that it was not an unusually good specimen of the ordinary home-made infusion. This is really a far more severe test than mere analysis, as flavour is often lost in preparations of this kind, while the main ingredients are retained. Good or even drinkable coffee is so uncommon in England that Mr. Branson's extract will be a boon to those who value this excellent nerve-stimulant.

GALE AND CO.'S COD-LIVER OIL EMULSIONS.

We have pleasure in recommending these excellent and useful preparations. The makers have succeeded in overcoming to a remarkable extent the "nastiness" of the oil, and have incorporated phosphorus, hypophosphites, and other drugs with great skill.

THE ALBION MILK AND SULPHUR SOAP.

(THE ALBION SANITARY SOAP COMPANY, 532, OXFORD-ST.)

This soap is a good and useful one. The materials are well incorporated, and, as far as we can discover, of excellent quality. It will be used with advantage in mild skin affections.

EAUX-BONNES (BASSES PYRENEES).

(STEBBING AND CO., 6, MARTIN'S-LANE, CANNON-STREET, E.C.)

This is from a well-known sulphureous spring. It contains but little solid matter, but a notable quantity of sulphuretted hydrogen.

UNGUENTUM PETROLEI.

(ALLEN AND HANBURYS, PLOUGH-COURT, LONDON.)

Semi-transparent, pale-yellow in colour, and perfectly free from offensive smell. We consider it a valuable preparation, and hope its use will become as common in England as it is said to be in America.

THE LANCET.

LONDON: SATURDAY, OCTOBER 20, 1877.

IT is with no common concern we find ourselves compelled to claim instant attention for the sanitary condition of the Royal residences. Nothing that affects the health of the highest family circle can be a matter of indifference to public opinion in this country. The sentiment of loyalty cherished by all classes of Her Majesty's subjects has, in the procession of long and happy years, shaped itself to a firm and loving regard for all that relates to her welfare and dignity, and the interest extends to every member of her illustrious house. It is impossible to stand by unmoved while lives of supreme value to the nation, and upon whose preservation and comfort a contented people would lavish its affectionate care, are placed in jeopardy by the inexplicable disregard of obvious precautions, and an overweening confidence in the efficacy of untutored zeal.

We have too long kept silence, and must now speak freely on this subject of pressing moment. If the interest we share with the whole community were not strong enough to overpower adverse considerations, the conspicuous neglect, or, which is worse, the mere perfunctory employment of measures to discover and remove the *cause* of repeated perilous sickness in the Royal family would render it a plain duty to point out that precious time is being wasted and daily increasing risk incurred. The cause to which we allude is not far to seek. The sanitary state of certain of the Royal residences, and notably of Marlborough House, is not only defective to a degree which constitutes a standing danger of what would be a public calamity, but it is discreditable, as an evil example set before the eyes of the country at a time when the claims of the health science are beginning to be forced on general attention, and in some measure recognised and obeyed. The allegation that within the boundary walls of properties owned and occupied by members of the Royal Family there exist conditions inimical to safety has been made in these columns and reproduced elsewhere; it has been met, and the result is eminently unsatisfactory. There has been more than one perfunctory inspection, and even that sufficed to disclose grounds for alarm; but the inquiry was wholly inadequate to the business in hand. A thorough and searching investigation by the official authorities who are accustomed to deal with matters of this description is necessary, and nothing short of this self-evident precaution can allay the anxiety felt. We are at a loss to comprehend why it should be needful to make this appeal. Surely if, as seems not improbable, an official inquiry into the state of Marlborough House should be followed by a report declaring that the property has never been thoroughly rid of old pest-centres, or efficiently drained, and if some of the other royal residences prove to be in scarcely better plight, it would be better to face the fact than expose the family and the household to senseless danger. It is inconceivable that there can be any serious desire to patch up what is condemned, and postpone the possibly costly work of reconstruction. If that were so, it would be a short-sighted and mistaken policy, important to controvert. No more ready and effective measure can be devised than an inquiry conducted by the official authorities at Whitehall into the sanitary state of the Royal residences, beginning with that occupied by the PRINCE OF WALES in Pall-mall. It should be exhaustive, and the report ought to be made public. Common sense points to this precautionary proceeding. It should not be delayed.

THE recent painful events in connexion with the trial of the STAUNTONS have produced a deep impression, both upon the public and upon our own profession. The popular mind is readily excited, but the excitement is usually evanescent, and passes off, leaving only a general feeling or prejudice, which remains after the events which have called it forth. There can be no question that one of the results of the recent agitation has been to shake the faith of ordinary persons in the present system of coroners' inquests and medical evidence in criminal cases, and there is reason to believe that the impression thus produced will not be without effect in the reform of our methods of procedure. But there have been signs, too, that in some quarters blame is attributed to the medical profession, especially to general practitioners, and it has been roundly asserted that they are wanting, as a body, in knowledge which they should possess. The charge is a most unjust one, and in fact, as may readily be shown, the blame rests not with the general practitioner, but with the present state of our law and practice, for which the general public is to a large extent responsible. The law, in fact, expects and demands that every doctor shall be a pathological expert. In a case of suspicious death, the coroner directs that the surgeon in charge of the case, or who has been accidentally called in, should make the post-mortem examination. He is subpœnaed to the inquest, and afterwards to the police-court and assizes, and whether he will or no, having made the post-mortem, he is called upon to give evidence, not merely as to facts, but as a scientific expert. He might perhaps refuse to make the post-mortem, but to do so would be regarded as tantamount to a confession of incompetence, or might even in some cases subject him to suspicion. Nor is it often that he would be justified in so refusing. Such being the case, the occasional errors and mishaps which ensue are clearly the fault, not of the doctor, but of the State.

In many ways the present custom is a serious injustice to the general practitioner. To say nothing of the time lost, and of the insufficiency of the fees, there are several ways in which coroners' post-mortems are an annoyance. To any man who is in large practice, especially if he has much midwifery, there is not only the sense of personal danger, but the fear of carrying infection and death to his patients, and that such a fear is not groundless has been proved in many instances. So that there are, we believe, but few men in large practice who would not gladly avoid compulsory post-mortems if they could.

But there are other and still more cogent reasons for some reform of the present system. The science of pathological anatomy has come to occupy a position far different from that which it held in bygone days, and even the last fifteen or twenty years have seen an immense revolution both in

its methods and results. It has summoned to its aid nearly, if not quite, all the modern sciences, and has invented unto itself a nomenclature which is as yet hardly understood even by its professed followers. Scarcely a year passes without the discovery of some new disease or a newly discovered result of an old one. "Old tubercle" is discarded for "catarrhal pneumonia," and chronic Bright's disease, itself of recent date, gives way for "arterio-capillary fibrosis." Syphilis is no longer a local disease followed by definite and well-known results, but an all-pervading, subtle poison, which by playing on this or that organ may simulate almost any known disease, yet in some cases with so little obvious morbid product, that, as in a recent case, an infant dead of syphilitic cachexia may in all honesty be certified, as a result of post-mortem examination, to have died of starvation. There are many diseases which can only be certainly determined to exist by microscopic examination, and that not at a casual glance, but as a result of prolonged, tedious, and often difficult investigation. But even with all these drawbacks to the ready acquisition of pathological science, there are yet others inherent in the subject or due to external causes which greatly increase its difficulty. With all the means and appliances at our disposal, there are, and perhaps will always be, cases in which it is a matter of the greatest difficulty to determine the actual cause of death. Not unfrequently, even in hospitals where cases are studied with the greatest care during life, and the post-mortem conducted by distinguished experts, the cause of death remains quite uncertain, or is a mere balance of probabilities. It may be that disease exists, which yet does not seem to account for the symptoms observed; or there may be two diseases, and their relative position as cause and effect cannot be decided. Often, too, there remain as visible and tangible results only the secondary processes due to the mode of death, but not its primary cause, or there may be such slight results from a fatal disease that only the most experienced eye can detect them. So that even those who make a daily study of and are constantly engaged in such examinations are too often baffled in their inquiries.

Such being the case, it is most unjust to expect and demand from general practitioners, who by their very success in practice are debarred from such studies, an extensive knowledge of the subject. As a rule their opportunities in morbid anatomy are few and far between, barely sufficient to maintain their acquaintance with ordinary morbid appearances. Perhaps they have never paid any special attention to morbid anatomy as students, and have discovered too late the loss they have incurred. Nor is this to be wondered at when examining bodies set the example of ignoring or slurring over it. It is only during the past three years that the Royal College of Surgeons has required even a formal attendance in the post-mortem room, and we have reason to know that even this has not been really exacted. Nor are we aware of any of the ordinary examinations in which there is any real test of practical acquaintance with it. It is not an uncommon plea for non-attendance at post-mortems, that they are of no use for examinations, and it is added that morbid anatomy is too difficult a subject and too uncertain in its results to be acquired by the average medical student. We cannot wonder, then, that there are many men, able and successful practitioners, who, from want of opportunities, length of time in practice, or from a not unnatural neglect of special study, feel themselves at a loss when called upon to make an examination and decide upon the cause of death in a doubtful case, especially when the life, honour, or interests of others are at stake. They have, at least, the right to demand that means should be afforded them of procuring the assistance of experts in pathological anatomy, in the same way that the aid of analytical chemists is obtained.

At present we shall not further enter upon the questions which must arise as to the mode of carrying out any such reform. Doubtless it would be better to do away with the necessity for the change by raising the standard of education, and making every doctor a pathological expert. But such a state, if not altogether Utopian, would require many years for its completion, and we do not believe it possible. There are, however, even without any change in the present system, two rules which should invariably be followed, and which, had they been observed in the recent case, would have saved much trouble. The first of these golden rules is to examine carefully and systematically every organ of the body, whether obviously diseased or not, and to draw no inferences and form no opinions until the examination is complete. The second is, to note fully the condition and appearance of every part and organ at the time of the examination, and to add nothing to, and subtract nothing from, these original notes. If it be added that it is always necessary to keep for further examination everything of doubtful nature, no other general rules are needed. Unquestionably it is one of the hardest of practical lessons to learn to avoid drawing conclusions from incomplete data, yet it is of the greatest importance. Had these common-place rules been followed in the STAUNTON case a vast amount of doubt and perplexity would have been avoided. But this is not all. When facts have been carefully recorded the time has come for drawing conclusions. It may be that there is no difficulty whatever; there may, on the other hand, be the most difficult problems involved. And here, if not before, it becomes in some cases necessary to seek the opinion of an expert. It is true that his opinion does not possess one-half of the value which it would have if he had seen with his own eyes the diseased organs. But it may nevertheless be of very great value if a right choice be made. Here, again, however, we meet with another anomaly. There is a hybrid science (if hybrid be the term to apply to that which is derived from many roots) called "Forensic Medicine," which professes to be the arbitrator in cases where law and medicine come together. On the one hand it embraces the antiquated traditions of criminal and civil law, and of the "crowner's quest," with a mixture of ancient cases and precedents; and, on the other, it professes to be skilled in the sciences of chemistry, botany, physiology, toxicology, pathology, gynæcology, lunacy, and we believe martyrology. It is, indeed, a wonderful motley science. Its professors are men for the most part of great ability and distinction, not, however, in this science, but in some one of its branches. But it does seem a little remarkable that when official law calls in the aid of medicine, it should, as a rule, seek unto one of the professors of this science, and expect him to act as referee on

all the sciences involved in it. Yet so it comes about that a clever chemist may sit in judgment on a question of pathology, of which he is profoundly ignorant, or a surgeon lay down the law in lunacy and brain disease. The more clearly it is understood that Forensic Medicine, as such, does not exist as a separate science, the more hope there will be of a reform of medical evidence in our law courts, and the less chance of misdirection of justice.

THE series of carefully recorded cases of hydrophobia which have appeared in our columns, some to-day and some a month ago, constitute a considerable addition to our knowledge of the clinical history of the disease. If they establish no new facts, they corroborate some which have hitherto received little notice. The present is no inopportune time for their publication. A remarkable number of cases of hydrophobia have lately occurred, and public attention is once more called to the prevalence and fatality of the most terrible disease with which medical art has to attempt to cope. Hardly a day passes without some fresh case being recorded in the papers, and we have good reason to believe that, besides the cases which are thus announced, many others occur, and are unrecorded.

A few weeks since we commented at length on the question of mental hydrophobia, and the distinction from it of the genuine disease. The question comes forward with regard to almost every case of hydrophobia occurring in adults. No person is probably ever exposed to the conditions of contagion—i. e., is bitten by a dog judged, with more or less accuracy, or suspected, with more or less probability, to be rabid—without passing through a period of intense mental perturbation. The agonies of doubt, apprehension, and foreboding, which "Shirley Keeldar" suffered, were sketched from life. Whether such mental disturbance may induce symptoms resembling those of the genuine disease, or not, it is certain that they are endured by many of the victims of actual hydrophobia, and that their character is stamped on the manifestation of the disease. The diversity of mental and moral temperament entails a corresponding difference in the symptoms by which the disease declares its presence. The manifestations of hydrophobia in man are perversions of the highest and of the lowest functions of the nervous centres. There is a disturbance of a reflex centre, and of the highest psychical organs. The former is tolerably uniform in its character, in its origin, and course. The latter is extremely variable; it may be slight or pronounced, almost eluding notice, or giving a special and even misleading aspect to the case. Instances of this variation, of a very striking character, are to be noted in the cases which have just appeared in our columns. In those described by Mr. RUSSELL STEELE and Mr. RIGDEN, the mental disturbance was almost absent; very slight wandering occurred only towards the close; there was none of the wild paroxysmal furor which marked Mr. MARTIN'S case, and which is commonly so conspicuous and so terrible a feature of the disease. On the other hand also, in the case recorded by Mr. HUGH NORRIS, psychical disturbance was so pronounced, so predominant, that the patient was taken to an asylum, apparently under the impression that the attack from which he was suffering was one of simple mental derangement. But the character of the symptoms leaves little doubt as to the real nature of the affection. The peculiar spasm is probably pathognomonic of the disease, and was conspicuous and typical in his case. Although death was attributed to the thin and flabby condition of the heart, it occurred about the period and in very much the manner in which it commonly ends the sufferings of the hydrophobic patient. The mental disturbance was early pronounced and intense also in the case recorded by Mr. J. ADAMS. On the other hand, the case narrated by Dr. DOLAN has little in common with genuine cases. There is no history of respiratory spasm or mental furor, and, except for the difficulty of swallowing, the case presents no extraordinary features.

It is important to remark that the same variation in the psychical symptoms is to be observed in the lower animals suffering from rabies, a point which has been specially insisted on by a recent writer in *Land and Water*. "The symptoms of true rabies are not always alike. Every dog possesses a distinct individuality, and in the earlier stages of rabies its approach may generally be detected by some alteration in the manner and habit of the tainted animal. In some which are naturally bright and lively, unusual dulness, while in others which are of the opposite disposition, unusual sprightliness, vivacity, or restlessness are occasionally the premonitory symptoms." This variation is important in regard to the diagnosis of the disease in man; it is equally important in regard to the recognition of the affection in animals. It seems certain that the saliva of a rabid animal will communicate the disease very early in the course of the affection, and this variation in the early symptoms may account for the doubts sometimes felt as to the nature of the disease of the dog by which hydrophobia was produced, and which has even led to the supposition that the affection may result from the bite of a dog suffering from some other disease than rabies. In two of the cases we have recorded the animal which inflicted the bite was a young dog supposed to be suffering from distemper. In one of these—that recorded by Inspector-General SMART—the evidence that the disease was not distemper, but hydrophobia, is very strong, and it gives probability to a similar inference with regard to the other case. There is, indeed, the strongest presumptive evidence that only rabies can engender the hydrophobia of man, but the fact can hardly be considered as demonstrated. It has even been asserted that the bite of a healthy dog has caused the disease. An instance in which this was supposed to be the case was recorded a short time ago by Mr. FLEMING, the chief living authority on the subject. All circumstances of the case were well investigated, and the conclusion seemed clear. But such instances are so rare as hardly to do more than "prove the rule," and most authorities agree with the opinion of the writer whom we have just quoted, that most of the occasionally-reported cases in which hydrophobia has apparently arisen from the bite of a non-rabid animal, only require to be thoroughly sifted to be disproved.

The remarkable variation in the period of incubation of human "lyssa" is also illustrated in these cases, especially in conjunction with that lately published by Dr. HUME, and with the case of Mr. A. BROWN at Chipping Ongar. They show once more that the disease may be latent in the system

for so long as three years. This extraordinary long duration of the latent period is of great importance, as Mr. FLEMING has lately insisted in the *Veterinary Journal*, in relation to the question of the spontaneous origin of the disease in the dog: "It may serve to explain some of those outbreaks in which the disease appears to arise spontaneously and without the intervention of a pre-existing contagium. If the virus can remain dormant for three or five years in man, why not also in a dog? And if so, need we wonder that, after the cessation of an outbreak of rabies among the canine population of a district or country, another may occur in three or five years?" The question is one which ought not to remain long without receiving at least a partial answer. We have recorded one case in which hydrophobia was contracted from a dog six months old. If there are any well-authenticated instances of an outbreak of the disease in young dogs which had been kept secluded in a place where rabies has been unknown for several years, a strong case would be made out for the occasional spontaneous origin of the disease.

The symptoms present in the cases which we have published were carefully observed, and corroborate many of the conclusions on which we lately commented, especially the characteristic nature of the respiratory spasm. This was the conspicuous feature in every case. It is compared by one to the "hurried or intermitting gasping one sees in a child attempting to drink when sudden thirst has been induced by recent violent exertion," by Dr. DUCKWORTH to the inspiratory spasms witnessed "when a cold shower-bath is administered to an individual." The observations of Dr. GOWERS explain to some extent, as Dr. DYCE DUCKWORTH remarks, the origin of these spasms, since they show the existence of marked changes in the nuclei of the nerves concerned in respiration and deglutition, the pneumogastric, glosso-pharyngeal, and hypoglossal; changes which clearly indicate an intense functional excitement of this region, and suggest that upon it the poison of rabies has, in man at least, a special action. It is very desirable that further observations should be made on the state of the nerve-centres in this disease, and we observe with regret that in the case recorded by Mr. NORRIS, in which a post-mortem inspection was made in an asylum, no microscopical examination of the nerve-centres appears to have been made. It is this respiratory spasm which, falsely interpreted, gave the popular name to the disease. It is excited not only by an attempt to drink liquids, but also by whatever is capable of acting on the respiratory centre, or even of acting on it through the mind. So we find that even the sound of running water will in some cases bring it on. The patient of Mr. RIGDEN's could not bear the sight of any other fluid, although that of his own urine had no effect upon him. So sensitive is the heightened reflex centre to special cerebral influences as well as to reflex stimuli.

It is interesting in connexion with the observation on the pathological anatomy of the disease to which we have referred that in Mr. STEELE's case irregularity of the pulse was a marked symptom, while in several epigastric pain was complained of. It is suggested that this pain was due to the spasmodic action of the diaphragm, but it is also possible that it was the result of the stimulation of the centre of the pneumogastric nerve, and was referred to the region to which its sensory filaments are distributed.

Several interesting and important questions regarding the prophylaxis and treatment of the disease are suggested by these and other cases, but on them we must reserve our remarks until next week.

THE results of a long and carefully conducted series of experiments on the motor centres of the brain appear in the Italian journal *Lo Sperimentale*, from the pens of MM. LUSSANA and LEMOIGNE. In regard to the cortex of the brain, they found that various movements could be produced by electrical, but not by mechanical, stimuli, though they are of opinion that if the theory of the existence of true motor centres in the cortex were sound, the latter cause should be as efficient as the former. Moreover, no evidence can be obtained showing that very young animals possess any cortical centres, which is in opposition to the view maintained by SCHIFF, who regards the centres of the cortex as sensory or reflex centres; and their own prior experiments have shown that reflex actions are particularly easily excited in young animals, much more so, at any rate, than in adult. Lastly, they notice that the paretic condition occurring after the extirpation of a cortical centre is only transient, and certainly does not permanently abolish the movements which may be aroused by excitation of the region. The authors think there can be no doubt that the centres of the cortex can excite to action, but that the excitation stimulates the true motor centres just as sensations liberate reflex movements. The paresis occurring after destruction or extirpation of the centres they attribute to a transient functional inertia, and represent it as being analogous to the mydriasis that is observed after section of the optic nerve. They consider also that a solidarity of functions is gradually developed between the motor centres in the cortex cerebri and those in the pes of the cerebral peduncle resulting from the psychical characters—in other words, the habits—of the animal.

In regard to the optic thalami and the middle white fasciculi of the cerebral peduncle, they find that on destroying them, paralysis of the movements of adduction of the forelimb on the same side and of abduction of the forelimb of the opposite side takes place, as well as paralysis of the toes. The same disturbances result if, instead of the optic thalami, those fasciculi of the cerebral peduncle are divided which lie near the median line and just above the substantia nigra. If, instead of destroying these parts, they are strongly excited, the opposite conditions are established, the adduction of the anterior limb of the corresponding side is increased, and there is abduction of the opposite one, so that the forelimbs are turned away from the injured side, and the animal rolls towards this side. The same thing happens if only the anterior border of one thalamus is injured. If the excitation of the optic thalami be limited to the most superficial strata, no movements occur. This stratum has something to do, though its function cannot be accurately defined, with the sense of vision, for if it be destroyed, the opposite eye is blinded. The authors, however, are strongly opposed to the views of LUYS which have been advanced in his work on the brain recently published in the "Bibliothèque Scientifique Internationale," and which are to the effect that

the thalamus opticus is the seat of the sensorium commune, and is especially connected with sensibility. The corpora quadrigemina are, with the superficial stratum of the optic thalamus, the centres for visual perceptions, whilst the processus a cerebello ad corpora quadrigemina constitute the centres for the lateral movements of the vertebral column. Their section occasions paralysis of the dorsal muscles of the opposite side, curvature of the column with the concavity looking towards the injured side, and a compulsory lateral recumbent position on the corresponding side. The lower plane of fibres of the cerebral peduncle (pes), and the internal capsule with its prolongation between the lenticular nucleus and the corpus striatum, innervate the muscles of extension of the posterior limb of the opposite side, and the same influence is exerted by the nucleus caudatus. The destruction of these parts therefore inhibits the forward movements, whilst their stimulation gives rise to an irresistible tendency to move forwards. The fasciculi teretes, which are seen on either side of the floor of the fourth ventricle, when irritated, cause extension of the neck and of the anterior extremities, flexion of the spine and of the posterior extremities, whilst their transverse division causes irresistible tendency to move forward.

The authors consider that neither the cerebellum nor the processus cerebelli ad medullam oblongatam contain motor centres, and any movements that are either excited or abolished when they are irritated or destroyed are due to injury of other and adjoining textures. They apply the term pedunculi transversi to the fibres which form the processus cerebelli ad pontem and the pons itself, and also enter into the formation of the medulla oblongata, and show that unilateral section of them paralyses the muscles which roll the body on its long axis to the opposite side. The pons contains centres for the movements of the body, and of the limbs, but no centres of sensation or of the will. Lastly, the medulla oblongata contains centres the functions of which are exceedingly diverse, some being sensory, some motor—such, for example, as the transverse fasciculi for the rolling movements, the fasciculi teretes for the backward movements, the lateral columns and the olivary bodies for the movements of the face, tongue, alæ nasi, and for respiration.

Annotations.

"Ne quid nimis."

MEDICAL ACTION IN THE PENGE CASE.

The Medical Memorial presented to Her Majesty's Principal Secretary of State for the Home Department, in the Penge case, was supported by seven hundred and thirty-three names, and additional letters of authority to append signatures arrived too late for use. The sole purpose of the action taken in this matter, so far as we are concerned, was to show that the medical evidence adduced at the trial did not prove the fundamental proposition submitted to the jury, and upon which the whole superstructure of the case for the Crown was based. Neither the post-mortem appearances as detailed in court, nor the inference suggested by the medical facts sworn to, could be held to bear out the allegation that Harriet Staunton died by "starvation or any other form of murder." We have used the concluding words of this sentence advisedly throughout the discussion, and we adhere to the judgment originally formed. There was no medical evidence of murder. It must be noted that the term *starvation* has been, and still is, employed by us in its legal sense, as that alone can be recognised in a court of justice. Practically, starvation occurs when the organism is not nourished, from whatever cause the arrest of nutrition may arise. Disease may have destroyed the faculty by which the body appropriates food. The supply may be adequate, the stomach may be full, but digestion, absorption, and assimilation being impaired, the sufferer dies of starvation as directly as though deprived of necessaries. This is starvation by disease, and if Harriet Staunton did not die of deprivation of food, she was possibly starved by disease. The position to which we limited the argument was that no medical evidence had been found to show that she was in a condition to digest food when the supplies were cut off. The body was emaciated, but it was also diseased. Either of several morbid conditions may have been present, and caused the death. We are not prepared to go a step beyond this opinion; and it would be foreign to our province to do so. It is impossible to look back on the case without great regret. The mistakes which have been made in dealing with it from first to last have been very serious, and should serve to secure for the whole subject of medical jurisprudence the consideration public safety and the interests of science demand for it. Professionally speaking, the collapse has been humiliating, and we feel strongly that the credit of Medicine requires the adoption of measures which shall prevent a repetition of the injury it has received. The course taken by the Home Secretary has been eminently judicious, and may well suggest the hope that when Parliament resumes its labours some attempt may be made, either by Royal Commission or Select Committee, to examine the situation which medical evidence now occupies in our Courts, and the strange misconception to which it is exposed.

THE CATGUT LIGATURE.

There is no subject of greater importance to surgeons than the safety and utility of the catgut ligature, and the cases presented to the Clinical Society by Mr. Bryant on Friday last are a valuable addition to our knowledge. A full report of Mr. Bryant's paper will be found elsewhere, but we wish here to draw attention to his conclusions—viz., that a catgut ligature, like a permanent ligature, *divides at once the two inner coats* of an artery; that at a later period it more or less completely severs the outer coat; that it is the best ligature, as the outer coat has not to be *completely* ulcerated through to allow the escape of the thread. Are not these conclusions beside the real point at issue? Surely no one has ever doubted that catgut, like any other thread, can divide the two inner coats of an artery, or that the outer coat will be severed if it be strangled, whether by catgut or silk. Used in this way it is attended with all the risks of a silk ligature, and in addition some peculiar to itself arising from its power of softening in living tissues. What is wanted is a mode of permanently closing an artery without exposing it to the risks attending injury or ulceration of its coats, and this has been sought in the formation of a ring of living tissue encircling the vessel. Mr. Lister has recommended catgut to be applied so as to close, not injure, the artery. Then as a result of the wound down to the vessel, and also from the presence of the ligature, lymph is effused which organises, contracts, and around the ligatured artery forms a firm ring of cicatricial tissue, which permanently occludes the vessel. What is needed is something which will resist

the pressure of the blood until the lymph has, by its organisation, acquired sufficient strength, and then disappear. It was hoped that catgut would fulfil these conditions. It has been proved to disappear when embedded in living tissues, and Mr. W. J. Fleming has described the changes seen in it—its softening and infiltration with cells, the development of vessels, and further organisation of the new tissue. The point of greatest interest is the rapidity with which these changes occur. From the time of the application of the ligature the anastomotic circulation develops, and the pressure of the blood against the barrier to its progress diminishes. Will the catgut remain firm until this pressure has so diminished that the lymph around the artery is able to resist if? If not, the constricted vessel opens out again, the blood pursues its old course through an *uninjured* vessel; the operation will have failed, but will not have done harm. It must always be remembered that Mr. Lister founded his statements and recommendation of catgut on the results of experiments in which his antiseptic treatment was carried out with precision, and he attached very great importance to the perfect prevention of putrefaction in and about the wound. Is it right to test his statements by other experiments in which his conditions are not observed? What we need is a series of cases in which the catgut was applied to arteries so as *not* to sever any of their coats, and where the antiseptic treatment was successfully employed. It will then, and only then, be time to try whether we can arrive at the same results under different conditions.

HOSPITALS AND THE PUBLIC.

SCARCELY a week passes but public feeling is startled, shocked, or more commonly outraged, by the appearance in the daily newspapers of alleged charges of indifference, cruelty, or neglect on the part of the authorities of one or other of the metropolitan hospitals. Last week St. Bartholomew's was condemned, this week censure has fallen upon University College Hospital. We were, however, able to adduce evidence which exonerated from all blame the house-surgeon of the former institution. It was shown that the unfortunate man Chalkley was taken from the hospital by the police, in spite of a caution given by Mr. Weiss that certain risks, such as hæmorrhage and erysipelas, might attend his removal to the police-cell. The charge which has been made against the house-physician at University College, although differing in some respects from that brought against the house-surgeon at St. Bartholomew's, is essentially similar. In both instances it was alleged that death, if not actually produced, had been hastened, by the removal of the patient from the hospital. The meagre account which has been published respecting the case at University College Hospital is somewhat as follows:—A man fifty-eight years of age who had been an in-patient of the hospital, although in a dying condition, was removed to the workhouse by the direction of the house-physician because he had used abusive language to one of the sisters, and threatened to strike her. Death occurred shortly after his arrival at the workhouse infirmary. The jury returned a verdict that death was the result of dropsy and Bright's disease, but that it was accelerated by removal from the hospital to the workhouse. We have ascertained the real facts to be these. The patient had been in the hospital nearly a fortnight, and had during that time been frequently remonstrated with by the house physician for the violence of his conduct, and for using disgusting and abusive language to the nurses. On the occasion referred to in the newspapers, not only did he threaten, but he actually attempted to strike the nurse, for endeavouring to urge him to take some beef-tea. Having been prevented from striking her, he spat at her several times, and even tried to fling the contents of the spitoon upon her. He was, of course, told that such behaviour could not be tolerated, and that he must leave the hospital. The resident medical officer thereupon wrote to the authorities of the workhouse to request them to send an ambulance to convey the man to the workhouse, as he was not able to walk. No risk was apprehended from his removal, as he had considerably improved in condition during his stay in the hospital. He was, moreover, carefully examined on the day of his removal, and it was decided that he might be taken away without risk if due care were exercised. At three o'clock in the afternoon he had half an ounce of brandy with his food, and was then dressed, and after another dose of brandy he was taken down stairs and carried to the ambulance.

At the worst, the order for the man's removal from the hospital was an error of judgment; and it is only charitable to suppose that no one regrets its unhappy consequences more than the gentlemen from whom the order emanated. Certainly nothing in this unfortunate case can justify the charge of malicious and vindictive cruelty which has been made against the medical officers of the hospital. It must be clear to any unprejudiced mind that unless some show of discipline were preserved in the wards of a hospital it would be impossible for doctors and nurses to perform many of their duties, which are not unfrequently most important when most disagreeable. If a patient repeatedly refuses to conform to the rules of any hospital into which he has gained admission, there is no alternative but to discharge him, provided always that no immediate danger is likely to attend his removal.

The public do well to look with a jealous eye upon the administration of all hospitals, and especially upon those to which they subscribe; but they have also a right to insist that some responsibility should attach to those persons who supply the sensational reports of these inquiries.

CREMORNE GARDENS.

THE definite closing of this place of recreation has had the effect of liberating for more useful purposes a plot of ground which measures, together with the grounds of Ashburnham House, we believe, some eighteen acres. It has been proposed that part of this space should be devoted to the construction of a hospital, which is much needed for the crowded district of Chelsea. It is hardly possible, without a close inspection of the site, to speak as to its suitability for such a purpose. It is one of the lowest parts of London, and it is well known that in constructing the main drainage works of the metropolis it was found necessary to pump the sewage of the Fulham and Brompton areas into the ordinary low-level sewer close to the north end of Battersea-bridge. Some parts of this suburb must be almost below the level of the Thames at high water. If, however, as seems to be the case, the difficulties of drainage have been overcome by engineering skill, it may be that the low position of the area need be no obstacle to its selection for the purposes of hospital construction. The close proximity of gas-works may be a more serious objection. It is certain that the district is much in want of a hospital, and our readers will recollect that the propriety of moving the Westminster Hospital into Chelsea was not long ago warmly debated in the columns of the daily press. We showed, however, at the time, that there were good reasons for retaining the Westminster Hospital in its present situation. The district of Chelsea comprises an area of 796 acres, and a population in 1871 of 71,089 persons. This gives an average of nearly ninety persons to the acre; but since the increase between 1861 and 1871 had been at the rate of twelve per cent. it is probable that the density of population

is still greater at the present time. The population is, to a great extent, a poor one, and there can be no doubt that the establishment of a hospital would be received as a great boon, but whether Cremorne Gardens is the best or even a good site we cannot at present undertake to say.

PRESERVATION OF SUBJECTS FOR DISSECTION.

To the endeavours of Professor Humphry, the medical student is mainly indebted for the passing of a Bill in 1871, which amended the Anatomy Act of 1832, and since then an important change has taken place in our dissecting-rooms in the first days of the winter sessions. An observer who remembers the old *régime* is at once struck with the increased activity that is everywhere apparent. He will recall his own student days, when, unless exceptionally fortunate, he had to wait for four, six, or even, in many cases, eight weeks before he began his dissections. Now he finds that almost every senior student is supplied with a part immediately on his return to work. The Bill of 1871 allows a subject to be kept for purposes of dissection for a period not exceeding eight weeks, and in the case of bodies received in the summer session or during the recess, this period dates from the 1st of October. In consequence of this great reform, subjects can be taken by the anatomical schools during the summer months, and the most important work of the winter be commenced without delay. About seventy bodies were received in our metropolitan schools before the commencement of the present session, duly prepared, and kept in readiness against the 1st of October. Of course, an increased amount of skill must be bestowed in order that such subjects should be properly preserved so as to be fit for dissection after such a long period—in many cases extending from the early days of June, and through the hottest days of summer. Various expedients have been had recourse to, with more or less success, but an experience of six years has enabled anatomists to determine with tolerable precision which modes of preservation offer the best chances of success. In some schools, the abdominal viscera have been removed, but this is generally quite unnecessary. The injecting fluids which have stood the test of experience are glycerine, solutions of arsenic, bichloride of mercury, and chloride of zinc. Most teachers give a preference to one or other of these, and preparations differing only in details, such as the method of injection or the precautions against any access of warm air or moisture, are used in nearly all our schools. Arsenical injections, besides being cheap, have the advantage of preventing the growth of mould over the surface. Glycerine acts very well indeed, but a small quantity of arsenic must be added to it, otherwise the mould is almost always developed. It is, however, comparatively expensive, and this would seem to be the only drawback against its general use. Chloride of zinc has a tendency to loosen and dissolve the areolar tissue between the muscles and other structures, and it undoubtedly bleaches the tissues, so that nitrate of potash in strong solution is required to correct this disadvantage. Bichloride of mercury, when used, should be dissolved in strong spirit; and the subject must, after injection, be kept in an atmosphere of alcoholic vapour in a hermetically closed tank. This answers as well as any method as far as the preservation of the body is concerned, but from the evaporation of the spirit when the subject is exposed for dissection the skin gets very dry unless particular care be taken.

One important consideration in the choice of a preservative medium is its solubility, for any substance which requires much water for its solution is sure to fail. It is probably from this reason that creasote, carbolic acid, and salicylic acid have not answered the expectations that many had anticipated from their use. By no plan, however, can the brain be preserved *in situ* in a condition for dissection. Fortunately this is a matter of secondary importance, as a supply of brains can be easily procured from the post-mortem rooms of the hospitals. Hydrostatic pressure is now frequently employed in preference to the ordinary method with a syringe, and is a great improvement, for the success of the process is thereby rendered much less dependent on the manual skill and practice of the operator. Subjects prepared with any of these preservative fluids can be readily re-injected with coloured paints as usual, and they have the additional recommendation of being far less likely than recent corpses to lead to serious symptoms from a dissection-wound. There can be no doubt but that the student at present has a clear gain over his predecessors of at least a month in settling down to his routine anatomical work, and this is an incalculable advantage at the commencement of the second winter session, when his anatomical examinations are so near, and when every day's good work is so very valuable.

ART IN HOSPITALS.

DR. LAWRENCE HAMILTON, in furtherance of his efforts to promote the pictorial embellishment of hospital wards, has designed a picture frame with special reference to economy and hygienic requirements. The frame is constructed of metal (in the example submitted to us, of tin), and it is arranged to receive two pictures, one on each side of a central diaphragm. It is proposed that the pictures placed in it should not be covered with glass, but that they should be well glazed or varnished on both front and back. The frame sent to us has a smooth rounded surface, and is japanned black; but it is quite practicable, at an increased cost, to design an ornamental frame of the same character, and to use a brighter colour. For the kind of frame described Dr. Hamilton claims the important hygienic advantages that it is non-absorbent; may be cleansed without damage by boiling water, or by soap and water, or water containing a disinfectant—say carbolic acid; and may be subjected for disinfecting purposes to dry heat in an oven: all important considerations in the wards of a general hospital, especially the surgical wards, and in the wards of infectious disease hospitals. None of the usual picture frames could be submitted to such treatment, however requisite, without being ruined; and it is to be remembered that these frames, particularly the backs, constructed of the coarsest and most porous unplaned wood, covered in part with common brown paper, are largely absorbent.

The economy of the metallic double-picture frames is twofold. First, each frame will carry two pictures, and this has its advantages both with reference to the hygienic requirements of a ward, and to the variation of its embellishment. It is proposed that each frame should be reversed at intervals, say of a week; thus affording a change of picture, and giving also an unmistakable indication that the "dusting" of the ward—that essential element of cleanliness—has been properly carried out. Dr. Lawrence-Hamilton directs particular attention to an evil arising from the common mode of hanging pictures which, injurious or undesirable in ordinary houses, is wholly unjustifiable in hospital wards. Pictures are ordinarily hung with the upper edge of the frame dropping forwards a little, the lower edge resting against the wall. A sort of bin is thus formed (an "aerial dust-bin," as Dr. Lawrence-Hamilton terms it) in which accumulate large quantities of dust and of other impurities floating in the atmosphere, which remain there undisturbed often for months. He insists that the picture should hang parallel to the wall, and this trap for collecting dust be thus avoided; and also

that to secure in hospitals the certainty that the dust has been thoroughly removed from the frame and the picture, it is desirable the frame should be double, and should (as above described) be reversed at each time of dusting. Besides the economy of the frame by forming it to carry two pictures instead of one, there is the economy of cost. The frame before us measures 26 in. by 20 in., and Messrs. Wm. S. Burton and Co., of 39, Oxford-street, are prepared to manufacture frames of this size, and constructed like the sample, at a cost of about four shillings each.

There remains the question of taste; but this can only be determined by experience of hanging a hospital-ward with pictures, glazed or varnished, and framed as Dr. Lawrence-Hamilton would have them.

CEREBRAL THERMOMETRY.

UNDER a title not precisely exact, but yet sufficiently so for the subject intended to be illustrated, M. Broca laid before the recent meeting of the French Medical Association at Havre the results of a prolonged investigation into the temperature of the surface of the head in health and disease. How far one can infer from such surface-observations to the actual thermic state of the contents of the cranium is surely an open question. At any rate, M. Broca has been able to show considerable variations in health with regard to this surface-thermometry, as will be seen from the following abstract of his paper. He employed an instrument of which the bulb was maintained in contact with the cranium, whilst its opposite surface was thoroughly insulated from external air. As a rule, he placed three of these thermometers on each side of the head—viz., in the frontal, temporal, and occipital regions respectively,—and thus obtained readings at six different points, each pair of which were symmetrically placed. To obtain a normal standard, observations were made on healthy individuals, nearly of equal ages and intellectual capacity; and, due allowance being made for the variation in the amount of non-conducting materials at the different parts of the head chosen, it was sought to obtain the mean temperature of the encephalon, the temperature of the right as compared with that of the left hemisphere, and that of the frontal, temporal, and occipital lobes of each hemisphere. The thermometer was allowed to remain applied for more than twenty minutes. The maximum temperature (twelve individuals were taken) was 94·73° F., the minimum 91·04°, giving a mean temperature of 92·87°. The thermometers on the left side registered invariably higher than those of the right; so that, whereas the latter showed a mean figure of 93·2°, the former gave a mean of 93°: in other words, in the normal condition the temperature of the left side was nearly ° higher than that of the right. This difference is only shown, however, in the resting state; when the brain is active, equilibrium comes to be established between the two hemispheres, which then give equal figures. From this M. Broca inferred that the blood-supply is more abundant to the left than the right hemisphere; but that when the brain is called into activity, the right hemisphere, being, as it were, handicapped, calls for a greater supply of blood than the left. As to individual lobes of each hemisphere, M. Broca found 91·25° to be the temperature of the occipital region, 92·69° that of the temporal, and 95·5° that of the frontal—a proof, he thinks, of the greater functional activity of the last-named. Giving his subjects a book to read, which would require about an equal amount of mental effort from each of them, M. Broca found that, after a period of ten minutes' duration, the temperature rose from 92·87°, the normal mean, to 93·61°—about 1°.

Clinically, this mode of thermometry has found its most useful application in the diagnosis of cerebral embolism. Many years ago M. Broca showed that, owing to the increased collateral circulation in the superficial vessels, the temperature of a limb in which a main artery was plugged was highest in the neighbourhood of the obstruction. In the brain, however, collateral circulation cannot be maintained; a clot in the middle cerebral artery, for example, causing complete occlusion in that vessel, and anæmia in the territory supplied by it. Theoretically, in such a case, the temperature over that region would be lower than in the frontal and occipital lobes, where there would probably be a rise due to compensatory hyperæmia. M. Broca records observations on two cases of embolic hemiplegia with aphasia in which these theoretical views were strikingly confirmed. In one of these the temperatures recorded on the *left* side were—over the frontal lobe 95·3° F., temporal 93·7°, occipital 96°; and on the *right* side—frontal 94·6°, temporal 94·6°, occipital 91·2°. Thus the temperature in the left temporal region was lower than in the right, whilst there was great elevation of the temperature in the left frontal and occipital regions.

It must be confessed that results such as these, although interesting, are open to critical objections, based chiefly on the distance between the brain proper and the surface of the skull. The media between scalp and brain are so various in nature and in conducting power, that surface-temperatures can only be used with very great allowances for a wide margin of error. Still the subject is worth following up, and we may hope to see a fuller exposition of his views by M. Broca than we at present possess.

THE PORT OF LONDON.

THE report of the medical officer of health of the port of London, Mr. Harry Leach, for the half-year ending the 30th June, 1877, has just been published. It presents an account of work done which cannot be contemplated without astonishment, having regard to the somewhat limited number of the port sanitary authority's staff, and the wide extent of jurisdiction within which the staff has to perform its duties. Thus not less than 6763 vessels were visited and examined during the half-year. Of these vessels 2852 were in the docks, and 3911 in the river. Of the vessels in the river 1496 were coasters, 1238 continental, 14 ocean, 143 Baltic, 40 Mediterranean, 946 sailing barges, and 34 canal boats. We commend these numbers to shore medical officers of health. If we reflect on the meaning of the figures, we shall at once understand that, thanks to the tact of the port sanitary staff, and to the co-operation of shipowners and masters, readily given through the judicious exercise of that tact, a system of inspection from ship to ship has been here introduced as an ordinary daily mode of port work, such as has hitherto been found possible in sanitary districts on shore, from house to house, only under exceptional circumstances. This sort of detailed systematic inspection is the very foundation of thorough sanitary work, and if it be possible on ship-board, it ought to be possible also in towns and villages. The port sanitary authority of London and their medical officer, Mr. Harry Leach, and staff are showing an example in inspection which merits the careful study of sanitary authorities generally. Of the vessels inspected during the year 355 had to be cleaned in various ways, six were fumigated, a goodly number were amended in details of ventilation, lighting, &c., and in nineteen instances the effects of seamen who had died on board from infectious sickness (yellow fever, small-pox, measles, scarlet fever, &c.) were disinfected.

A very interesting part of the report relates to the importation of epidemic diseases. During the half year scarlet fever was brought into the Thames by a Melbourne ship, the disease having existed on board during the entire pas-

sage. Measles also was imported by a first-class Calcutta ship, by way of the Suez Canal. The disease broke out at the Sandheads, and continued uninterruptedly among a large number of children on board until the vessel arrived in the Victoria Docks. Erysipelas was imported from Antwerp by one emigrant ship, and small-pox by another.

We shall reserve Mr. Leach's observations on this important subject for another article. Here we content ourselves with thus briefly summarising the sort of materials found in his present report.

"STARVATION OR SYPHILIS."

THE letter of a "Physician to a Children's Hospital," published in another part of our columns, calls attention to the facts of a case recently reported in the daily papers, in which Dr. Hardwicke saw fit to censure Mr. Weiss, one of the house-surgeons at St. Bartholomew's, for giving a certificate as to the cause of death of a child who had been under treatment at the hospital. We fully agree with our correspondent that the conduct of the coroner, so far as can be judged from the newspaper reports, was not justifiable. Nor can much be said for the doctor, who from a post-mortem examination only, with no knowledge of the case during life, stated that a child, seven weeks old, died from starvation. It may be true that, like multitudes of other infants amongst the poorer classes, the child was practically starved by the method known under the euphemious term of "improper feeding." But it only shows how rashly men will draw conclusions not warranted by facts, that a medical man should, with the "Penge case" ringing in his ears, declare that death was due to starvation, because the child weighed half as many pounds as, on thooretical grounds, it ought to have weighed. We are not inclined to be too hard upon the doctor, for if we could only apply such reasoning in the case of all weakly, puny, syphilised infants fed on corn-flour and arrowroot, and dying in convulsions, and convict the parents of manslaughter by starvation, we might in course of time greatly improve infant feeding, and perhaps indirectly limit the population and check immorality. At present we can hardly go the length of hanging parents for having puny weakly infants, but the terrors of the law might be invoked to promote proper feeding, and one or two nurses might be hanged "*pour encourager les autres.*"

We fully agree with the coroner that certificates are often given in a very loose and careless manner, and no doubt a strict investigation should always be made before giving a certificate, but when a child suffering from disease which is clearly understood, is under treatment in hospital, and dies apparently from the disease, there would often be great hardship in refusing certificates, nor would it be justified without very strong grounds. In the present case the coroner appears to have fallen into an error which, as a medical coroner, he should have known how to avoid.

FAMINE DEATH-RATES.

THE Registrar-General, in his last Weekly Return, calls attention to the effects of the famine in India upon the recent rates of mortality in the city of Madras. The usual death-rate of the city, which is excessive, has been more than quadrupled. The average weekly number of deaths in Madras during the first eleven months of 1876 scarcely exceeded 300, but during December and the first two months of this year the weekly deaths rapidly rose to 1273, and after a decrease during the spring and early summer they rose again to 1150 in July. Famine death-rates, at any rate in a city like Madras, are dependent far more upon the effects of epidemic diseases, which almost invariably attend in the wake of famine, than upon the direct effect of starvation. The terrible death-rate in Madras has been actually caused by cholera, small-pox, diarrhœa, dysentery, and fever, all of which have been fatally epidemic among the thousands of starving immigrants who have from time to time crowded into the city from the surrounding famine-stricken districts, as well as among the residents of the city. During the first 34 weeks of this year, ending August 24th, the annual death-rate in Madras averaged no less than 127 per 1000; in London, during the same period, the death-rate did not exceed 22 per 1000. It should be remembered, however, that the death-rate in Madras is calculated upon the normal population of the city, which was estimated at 397,552 persons in the middle of this year, without any correction for the crowds of half-starved immigrants referred to by the Sanitary Commissioner of Madras in his reports, the numbers of whom there does not appear to have been any attempt to estimate, although there can be little doubt that the exceptional death-rates have been mainly due to this influx, and its effect in zymotic disease production. A more trustworthy estimate of the terrific extent of famine death-rates may be formed from a few figures published by the famine relief committees in Madras, and recently transmitted by *The Times* correspondent. It is stated that in a certain number of affected districts in the Madras presidency, urban and rural, 1,051,009 persons were in receipt of relief during the week ending August 17th, among whom 6361 deaths occurred in the week; this would be equal to an annual rate of 316 per 1000. In thirteen affected districts, including a considerable proportion of urban population, the annual death-rate in the week was equal to 483 per 1000, signifying that if the rate prevailing during the week were maintained for a year scarcely more than half the population would survive. Among more than half a million of persons receiving village relief, the rate in the week was equal to 187 per 1000. It is scarcely possible fully to appreciate the amount of human suffering, and the full effect upon the survivors, which are signified by the famine death-rates that have recently prevailed in the famine-stricken districts of Madras.

THE ROYAL NAVAL HOSPITAL AT STONEHOUSE.

SOME most important alterations have lately been made at this hospital which have greatly improved its sanitary arrangements and its appearance. As the hospital is about 120 years old, these have not been done before they were much needed. The oblong wards arranged in pairs, with the chimney and fireplaces on one side, the windows along the other and at one end, and a doorway at the other end, were very gloomy and badly ventilated. At Dr. Domville's suggestion, the wall on each side of the fireplace has been removed, so that a wide archway now connects the two adjacent wards, and a cross-ventilation and much better light are secured. This arrangement is practically the same as was adopted at the building of King's College Hospital, where the wards are conspicuous for their cheerful appearance and freedom from any stuffiness. The exterior of the building has also been much improved and beautified; trees have been planted, rhododendrons put in, and new flower-beds made, so that the dreary aspect which it formerly possessed in common with most hospitals has been very agreeably changed. There will now be a pleasant view from the windows of the wards, and the alterations will permit the convalescents to take exercise under conditions which cannot but materially hasten their recovery. Our London hospitals have hitherto paid little or no attention to ornamenting their grounds, or even to such a simple thing as

window-gardening, but we hope that an example such as this will not pass quite unregarded, for there are few of them which cannot do something more than is done at present to improve the sense of pleasure and develop an idea of beauty in their inmates. A new chapel will also be erected in place of the present unsuitable apartment. The Admiralty authorities must be congratulated on their wise attention to the comfort of the patients who must necessarily come under their charge on account of injuries or diseases incurred whilst in the public service, and no one can grudge the expenditure of public money in so good a cause, and especially when such excellent results can be shown.

THE CHAIR OF CLINICAL SURGERY IN EDINBURGH.

THE Crown has at length made up its mind as to the successor to Mr. Lister in the chair of Clinical Surgery. Mr. Thos. Annandale is the fortunate gentleman appointed. It would be affectation to conceal the extensive disappointment which will be felt that another Edinburgh teacher has been overlooked in favour of Mr. Annandale, his junior in the profession. It has been apparent from the delay that has occurred in filling this chair that the Crown has felt undecided, and it is not difficult to guess the influences that have been brought to bear for and against the various candidates. So long as such appointments rest with the Crown all that is possible is to state the claims of different gentlemen, and acquiesce in the result. Mr. Annandale was sure of some such favour at the hands of the Crown sooner or later on the score of his own acknowledged merit, both as a surgeon and a teacher. That he has been promoted a little out of turn is not his fault. Besides his own personal qualifications for the chair, he has the great qualification of having been a favourite pupil and assistant of Mr. Syme, with whom the system of clinical teaching in Edinburgh is so much identified. He enjoys also the respect of Edinburgh students. It is pleasant to notice the not insignificant fact that Dr. P. Heron Watson has, since the appointment, been elected President of the Royal College of Surgeons of Edinburgh—a selection by which the profession marks its sense of his great merits as a surgeon, and ratifies his claim to the highest distinction.

BATH AND THE BRITISH MEDICAL ASSOCIATION.

ALREADY diverse opinions are expressed in Bath as to the advantages to be gained from the visit of the British Medical Association next year to that city. The sanguine see in it a way "to advertise the attractions of Bath and to get its name mentioned in the London press," and, no doubt calculating on the readiness with which the members of our profession lend their names, they already see "three thousand physicians and surgeons" testifying to the excellence of the hot waters. On the other hand, there are those who are somewhat sceptical, and rather view the proposed incursion with dread, as bringing a lot of doctors to the town, who are sure to find fault. Nor are their fears without foundation. On arrival at Bath the visitor will appreciate the reception the Great Western Company gives the gouty and rheumatic patient that may come to the city by that route, and will note the steep dark stairs he is made to descend and the arrangement which compels him to remain outside the station to secure his luggage. Whilst waiting for it he will have ample opportunity of observing the state of the river, which is as filthy as the river Alpheus must have been after flowing through the Augean stables. Entering his fly he will find himself shaken to pieces over the stone pitching that the corporation will insist on maintaining in all the main thoroughfares. With the baths and the hotel in connexion with them the visitor will have no cause to complain. Of the former we have no hesitation in saying they are the most luxurious in Europe, and the latter, under the new manager, has greatly improved, and is a very comfortable home for invalids. We would, however, advise the directors to lay down wood pavement all round the hotel; the noise of the heavy traffic coming up the street from the direction of the Midland Station during the early hours of the morning is extremely trying to invalids. The sanitarians of the Association will not unprofitably spend a few hours in examining the condition of the water-supply and the arrangement for sewage removal in some of the immediately adjacent suburbs of the city. We make these observations in no ill-natured spirit; we cordially admit the many advantages Bath presents as a place of residence, and the highly beneficial results to be obtained by the use of the waters in certain cases of gout and rheumatism; but we would protest against the greed that would make a profit of these advantages and neglect the comfort and health of the visitor. The corporation ought at once to attend to the sanitary condition of the suburbs, all houses in which ought to be brought into connexion with the main drainage and supplied with the company's water. The sewage of the town, drainage of stables and the refuse of slaughter-houses, &c., should be diverted from the present outfalls, and not permitted to enter the river till some distance below the town; and, above all, the abominable stone pitching entirely replaced by wood or some other noiseless paving. It is to no purpose to provide luxurious baths for the invalid if his joints are to be tortured by the shaking of his fly and chair in the journey to and fro, or his nervous system jarred by the ceaseless rattle of the streets.

FRIENDLY SOCIETY MORTALITY AND UNCERTIFIED DEATHS IN GLASGOW.

IN his report relating to the three months ending June last, Dr. Russell, the medical officer of health for Glasgow, states that the causes of 12·5 per cent. of the deaths in that city were not certified, and that no less than 39 per cent. of the deaths were of persons insured in friendly societies. It appears that in 30 per cent. of the deaths under one year the cause was not certified; affording strong presumptive evidence that no medical attendance had been obtained. Among the deaths of children aged between one and five years, the proportion of uncertified deaths was 13·5 per cent.; while it did not exceed 7 per cent. among those dying aged five years and upwards. It is also reported that 20 per cent. of the infants dying under one year of age were insured in friendly societies, 48·5 per cent. of those aged between one and five years, and 42 per cent. of those whose age at death exceeded five years. Dr. Russell's contribution on this important subject deserves most careful consideration, and naturally induces regret that the Registrars-General of England, Scotland, and Ireland do not recognise the desirability of publishing periodical returns giving similar information for all parts of the United Kingdom. Insurance in Friendly Societies is, probably, not so general in England or Ireland as in Scotland; but its extent should be known, although, in order satisfactorily to determine whether insurance, especially of children, exercises any influence on mortality, other information would be required than a return of the number of deaths of insured persons. It would also be necessary to know the number of insured, which should certainly be furnished by all societies undertaking this branch of insurance business. There is one point on which Dr. Russell's figures are especially suggestive, and on which it would be desirable that he should, if

possible, furnish further information. We are told that the causes are uncertified in 30 per cent. of the deaths under one year, and in 14 per cent. of those occurring between the ages of one and five years; also that 20 per cent. of infants dying under one year, and 48·5 per cent. of those aged between one and five years, were insured in friendly societies. It would be important to know, first, whether the proportion of uncertified causes was as large among the deaths of insured as among those of uninsured infants; and, secondly, what measures are adopted for securing the "satisfactory evidence" of the cause of death, which the Act of 1875 enacts shall be produced in order to justify a friendly society in making a payment on the death of an insured child. It is quite evident that "satisfactory evidence" of the cause of death of a child who has died without medical attendance, and who has not been the subject of an inquest, is not easily obtained, and it would be interesting to know to whom the Act intended that the evidence should be satisfactory, and how this difficulty is met in practice. In the interests of infantile life it is of the first importance that the payment of insurance money on the deaths of infants who die without medical attendance, and relating to which no certificates are forthcoming, should not be too much facilitated.

THE INDIAN FAMINE.

ANY doubt which may have existed as to the acme of the famine in India having passed, must be effectually allayed by the latest news. Official telegraphic information from Simla, dated Oct. 14th, shows that the decrease in the number of persons receiving relief on the public works and gratuitously is marked and continuous, and that the crops now being sown or planted in the ground of the drought-stricken provinces, and the provinces threatened with drought are saved by a general rainfall. In the Madras Presidency, at the date given, 587,228 persons were employed upon the relief works, a decrease of 41,031 as compared with the previous week, and 153,125 were being relieved gratuitously, a decrease of 72,466. In Mysore 69,693 were relieved on works, and 126,204 gratuitously, a decrease of 25,688 in the number of the latter. In the Bombay Presidency there was a decrease of 36,121 adults on the relief works, and of 7184 children connected with them, also of 6524 receiving gratuitous relief.

On the 11th inst., the Secretary of State for India (Lord Salisbury), in an address to the Chamber of Commerce at Bradford, in Yorkshire, briefly discussed the question of recurring famines in India. He dealt with it in a fashion which will hardly commend itself, we should imagine, to the people of the United Kingdom generally. He held that the calamity was an exceptional one, and could hardly be expected to recur in the present generation, and he appeared to think that a policy based upon the principle of sufficient for the day is the evil thereof was the proper one to pursue. He sneered at irrigation as a remedy for famine in India. Irrigation, his lordship admitted, was a very good thing, but, he observed, "it will not prevent famine, for this simple reason, that water will not flow up-hill. (Laughter.)" What is to be said of a responsible Minister of the Crown, while speaking of so hideous a catastrophe as that of the present famine, attempting to throw into ridicule a question so serious as that of irrigation? It is one thing to deprecate a reckless expenditure which might impose upon the population a permanent burden, in the long run, perhaps, more injurious to their material interests than recurring famine; it is another to suggest a view of a subject which has had no place in the minds of those persons who have advocated, and still advocate, irrigation as an essential part of the public works which must be undertaken before India can be saved from recurring famines, or the disastrous effects of these famines on life diminished. Lord Salisbury maintained that "the true remedy against occasional famine and scarcity is the frugality of the people themselves in times of plenty;" adding: "If they are too many for the land to support, there must be emigration." We are much mistaken if this expression of opinion is not read in India with indignant astonishment. The words might have been addressed properly enough to a body of West-Riding operatives, but the people who in India suffer and die of famine live in the best of times with hardly a margin between a bare sufficiency and starvation. Vast as the number reads to us of the people relieved in the present famine, it is comparatively a bagatelle to the total population of the provinces affected with famine. Again, the question of emigration there, could it be seriously raised, would involve millions of individuals; and where is the locality which would offer a field for the emigrant? Which offers the more feasible prospect of successful result, steadily extended irrigation of selected districts and the development of roads, rail and other, or the cultivation of thrift among a section of a population living at the best of times on the verge of starvation, or the encouragement of emigration among such a section? The great opportunity of distinction which India offers to a statesman, apt to seize the occasion, at the present moment should of itself provoke statesmanlike politics. But Lord Salisbury seems inclined to avoid, and not to seize, the occasion.

THE GOLDEN-SQUARE HOSPITAL.

ON July 21st we announced that an inquiry had been made into the medical management of this hospital. Although the report of the committee of inquiry has not yet been published, its purport seems to be tolerably well known, and has, indeed, been commented on both by the metropolitan and provincial daily press. It may be remembered that the inquiry was instituted at the request of his Royal Highness the Prince of Wales, at that time a patron of the hospital, who nominated the Earl of Dunmore to act on his behalf, and requested Sir William Gull to watch the proceedings. The President (the Marquis of Bute), being prevented by indisposition from attending the inquiry, was represented by the Duke of Grafton and the Earl of Clarendon. As we stated, all the charges against the medical superintendent were not investigated, but sufficient evidence was adduced to satisfy the committee of inquiry that the medical management required reorganising and remodelling. Since the inquiry, and as a result of it, their Royal Highnesses the Prince and Princess of Wales have withdrawn their patronage from the hospital, and the Marquis of Bute has resigned the presidency, while just before the inquiry the chairman of the committee of management, General the Honourable Percy Fielding, the vice-chairman, Mr. Sydney Smith, the surgeon, Mr. Pagin Thornton, the secretary, Mr. Evans, and the matron sent in their resignations on account of alleged mismanagement. Two years ago Sir William Jenner resigned the office of consulting physician.

On public as well as professional grounds such revelations cannot be allowed to pass unnoticed. This inquiry has disagreeably revived the prejudice against special hospitals, and seems to justify the suspicion with which the management of some of these institutions is regarded both by the public and the profession.

Already the Council of the Hospital Sunday Fund, as almoners of the public, have shown their disapproval of the mismanagement of the Golden Square Hospital by withholding the usual award to the institution, and it is not to

be wondered at if the public adopt some similar course until they have guarantees of effectual reform.

It is only right to add that since the above inquiry the other members of the medical staff have passed a vote of confidence in the medical superintendent, and have expressed their opinion that the charges which have been brought against him are unfounded. Under these circumstances we do not see how the committee of inquiry can any longer withhold their report. In fairness to Dr. Mackenzie, and in the interest of the public, it is undesirable that the evidence should be permanently suppressed.

SANITARY STATISTICS OF THE BIRMINGHAM GENERAL HOSPITAL.

THE committee of the Birmingham General Hospital have been aroused into a state of astonishment and indignation by the statements, made by Mr. Lawson Tait, as to the healthiness of the hospital, both in his book on Hospital Mortality, and in his paper read at the meeting of the British Association at Plymouth, and have therefore had an investigation into their correctness made by their registrar, Dr. Saundby. That gentleman has prepared a series of tables, which have been verified by Mr. Slocombe, the auditor of the hospital, which seem to prove that Mr. Tait has made two serious errors in his statistics of this institution.

"First, in his table D, which he represents as the most important, the death-rate, which he states to be 34·49 per cent., is found, when worked out correctly from his own figures, to be 27·72 per cent.

"Secondly, he has committed the extraordinary statistical blunder of comparing the death-rate of the several hospitals, not only for different years, but for different numbers of years."

The committee call attention to the fact that, owing to recent sanitary improvements in the hospital, which have been effected at a cost of £20,000, there is now an almost absolute immunity from pyæmia and erysipelas, and, consequently, that their mortality after operations has greatly diminished. This is proved by the fact that the mortality after amputations in the General Hospital during the last five years (1872–77) has been 15·26.

The investigation on which the statement of the General Hospital Committee is founded seems to have been carefully conducted, and the statistics to be reliable and worthy of attentive consideration.

SCIENTIFIC SLAUGHTERING.

THE employment of dynamite as a means of slaughtering cattle may be an ingenious device, and kindly intended, but we fear it is not likely to be approved. The recommendation most strongly urged in its favour would seem to be that it may be used by ordinary slaughtermen, whereas a special development of muscle and skill is required to make a rapid and, therefore, humane operator with the pole-axe. As a matter of fact dynamite will never kill instantly and completely without so acting on the body as to render its employment undesirable. If a beast can be handled with such ease as to admit of the charge being properly applied, the present mode of slaying may be most readily and effectively employed. In the cases where any difficulty is likely to arise with the use of the pole-axe, the dynamite cannot be more readily used. In short, the new process offers no advantage over the old, and it opens the way for much unintentional cruelty by the wrong placing of the charge, so that the animal is tortured to death, or has to be put out of its misery by the use of the axe. Any expedient for the reduction of suffering inflicted on the brute creation must claim sympathy, but in this instance we think zeal has outrun knowledge, and would augment the evil it aims to cure.

METROPOLITAN HEALTH DISTRICTS.

DR. JOHN DIXON has recently presented an annual report on the sanitary condition of the parish of Bermondsey, he having succeeded Dr. Parker as medical officer of health. The population of the parish is estimated at 92,000, and it appears, as a consequence of the large increase by immigration during the last twenty years, that the proportion of children under five years of age is much higher than the average proportion in the metropolis generally, while the number living at sixty years of age and upwards is considerably less. The seven principal zymotic diseases caused 350 deaths, as compared with 452 in 1875. The infantile mortality is below the average London rate, and the number of deaths under five years was in excess. A total of twenty-six deaths were uncertified by any registered medical practitioner, so that Bermondsey still has more than its share of such cases.

Mr. Samuel R. Lovett, medical officer of health for the parish of St. Giles, reports a total of 1102 deaths and 1633 births in his district during the past year. A total of thirty-one deaths from scarlet fever occurred either at their own homes or at the fever hospitals, and it appears that this disease, which attacked the population with great severity, was aggravated in most cases by defective house-ventilation, deficient water-supply, and ill-trapped gulleys in the surrounding mews. Eighteen cases of small-pox occurred, four of which were fatal, and one of the sanitary inspectors caught the disease while in the performance of his duty in disinfecting clothing. Mr. Lovett calls the attention of the Vestry to the great need that exists of a mortuary, with adequate accommodation for holding coroner's inquests. During the year six deaths only were uncertified.

LONDON GAS.

PROFESSOR FRANKLAND has done good service in drawing attention to the defective illuminating power of the gas supplied by the Metropolitan Gas Companies. In 1851 Professor Frankland found the average light-giving value of the London gas was 7·01, and last year Mr. Humpidge, using the same method of analysis, found the average to be 7·02, or nearly stationary for a period of twenty-five years, notwithstanding the illuminating power has been raised by Acts of Parliament from twelve candles to sixteen. The way in which the gas companies have been able to elude the statute has been by an alteration of the testing power, for Mr. Humpidge found that the burner at present in use gives less light by two candles than that employed from 1860 to 1861, when a fourteen-candle standard was in force. In order to prevent any further shortcomings by the gas companies in this respect, Professor Frankland suggests either the adoption of a standard burner by Government, or the abandonment of the present photometric test and the employment of chemical analysis for determining the exact illuminating power of the gas supplied to consumers.

"CAUTIONED AND DISCHARGED."

IN a remarkable case of thieving investigated at the Mansion House on Wednesday last, the Lord Mayor recognised the person charged as a highly respectable man who had been a corn factor, and was favourably known in the City. The prisoner was seventy years of age, and having sustained great reverses, his mind had been impaired, and kleptomania developed as a symptom. It appeared that he has been in the habit of purloining knives. The nature of the case seems to have been a matter of notoriety, and it was speedily settled by the discharge of

the accused. What further steps will be taken for the protection of this poor man? There is something almost grotesque in the absurdity of dismissing an individual—who is clearly perceived to be "not accountable for his actions"—from surveillance "cautioned and discharged." It would be reasonable to assume that something will be done in the matter but that in more than one instance, no precaution having been taken, a small offence of this class has been followed by an act of greater moment. Cases of this nature, with untoward consequences, will occur to the recollection of our readers. If it be legally possible, which we take leave to doubt, to dismiss a charge of felony on the ground of insanity, without taking security for the safe custody of the accused, it is obviously imprudent and unfair to do so. The poor old man, who was happily recognised by the Lord Mayor, may repeat his offence where he is not known, or the next "impulse" he fulfils may be of a nature more serious to himself or those around him. There should be a rigid rule applicable to these cases; at present the practice is ill-defined by law, and the precedents are confessedly unsatisfactory. The discretion exercised in dealing with kleptomaniacs is too often unwise.

A SANITARY DEADLOCK.

ONE way in which the drainage of a place may be delayed, to the imminent danger of the inhabitants, is typically exemplified at St. Columb, a small market town in the north of Cornwall, where drainage has been mooted as far back as 1873, and where, instead of having no scheme, the ratepayers are on the horns of a dilemma with two rivals for their favour. The Local Government Board has approved of a deep drainage system, which is rather costly, whilst the resident medical officer of health proposes, as an alternative, the deepening and inclining of the present drains, with periodical flushings, and this has the great merit in the eyes of the inhabitants of being very much less expensive. The Local Government Board refuses its sanction to the latter plan, and the local sanitary authority will not undertake the deep drainage. An inquiry is threatened, and may shortly be held, and this will probably result in the dissolution of the present local authority, and the town will then perhaps be merged in the rural sanitary district. As the rural sanitary authority is the board of guardians of the district, it is difficult to see in what manner this will improve matters. Probably an epidemic of typhoid fever will take upon itself to solve the difficulty, but we can hardly imagine that the residents will all be satisfied to await its coming with due unanimity, rather than take energetic measures to remove a deadlock which is at present such a satire on the boasted excellence of our local administration.

STARVATION OR THE WORKHOUSE.

THE case of a poor aged woman who died of want a few days ago, after the discontinuance of "out-door relief," is of a nature to demand very grave consideration. The facts will be familiar to our readers through the public newspapers. There is nothing especially notable about the occurrence, except as supplying an effective illustration of the way in which the improved method of administration works. Probably many individuals and families which under the old system received only partial assistance from the rates are now wholly maintained at the public cost. In so far as this can be considered a triumph of policy, the advantage has been gained. On the other hand, doubtless, aged and stubborn persons, who "will not" go into the house, either rely on other resources, to the proportionate relief of the rates, or they die. The poor old woman whose case has attracted some attention, unfortunately, succumbed. Looked at from the Poor-law point of view, the event has been regrettable, and some will think it is to be deplored on wider grounds. However that may be, collateral benefit is likely to accrue to the cause of humanity if the practical consequences of stoutly refusing "out-door relief" are carefully investigated. We are fully prepared to concede that persons who cannot support their lives without public assistance have no "right" to such feelings of affection as may have impelled a woman of ninety years to face death from want rather than consent to be separated from her daughter. Meanwhile the strict law of social prudence might possibly be relaxed, at least, in cases where the alternative of leaving a sick pauper to starve is the allowance of a pittance so small as two shillings and a loaf per week. The course pursued may have been sagacious, but it was shortsighted.

DEATH FROM CHLORAL.

A DEPLORABLE case of poisoning by chloral, which has just taken place in Dublin, again calls attention to the need of especial caution in handling this drug. The deceased, a wife, while in a state of partial intoxication, is believed to have taken a bottle from her husband's portmanteau, and swallowing a large quantity, died. The husband, a medical officer in the army, had occasionally administered a dose of the drug to the deceased, but she was unacquainted with the proper quantity. There is no room for reflection on the case. Every care seems to have been taken. Meanwhile, it is important that every occurrence of the class should be noted. There is great reason to fear that the domestic use of this powerful and dangerous medicine is not yet discontinued, in spite of the many "misadventures" which have occurred.

ABERYSTWITH WATER-SUPPLY.

WE have received communications which show that the water-supply of that popular and much-frequented health-resort, Aberystwith, is drawn from polluted sources, and consequently dangerous to the health of the community. It appears that the water has been sucked from stagnant ditches in the neighbourhood of the pipes leading from the well to the pumping-station; independently of this source of impurity, the condition of the well is not what it should be. It is sufficient to state that cattle have had free access to the spring, which in times of flood considerably overflows its limits; in addition to this source of impurity is the disgusting fact of the close proximity of the cemetery. Such a water-supply is a disgrace to a first-class watering-place, and, when the fact becomes fully known, cannot fail to affect its fortunes most injuriously. In these days, when such elementary sanitary requirements as good drainage and pure water are thoroughly appreciated by the public, no place can long hold its position that fails to supply them. One of the first questions asked by patients of their medical man before starting for a health resort is generally as to its sanitary conditions, and the selection is usually determined by his advice. Already we hear that the value of some of the houses has fallen considerably during the last few years, and it will fall much further unless means are taken to provide the town with pure water, and from sources which are entirely free from suspicion. We understand a meeting of ratepayers will be convened in November to determine what action is to be taken with respect to obtaining a better and purer supply, and it is to be hoped that the consideration that the interests and the prosperity of the town depend on their decision will lead them to insist on vigorous measures being adopted to remove

the stigma that now rests on the town before the next summer season comes round.

THE rate of mortality in London last week, as shown by the Registrar-General's return, was 19·5 per thousand—a rate slightly in excess of that of the previous week. The deaths numbered 1321, of which 193 were referred to the seven principal zymotic diseases—namely, 14 from small-pox, 33 from measles, 50 from scarlet fever, 11 from diphtheria, 10 from whooping-cough, 29 from different forms of fever, and 48 from diarrhœa. The fatal cases from measles, scarlet fever, and diphtheria showed a marked increase on the returns of deaths from these diseases in recent weeks; whilst the fatality from whooping-cough was unusually slight. The deaths from affections of the respiratory organs, which in the six previous weeks had steadily increased from 168 to 257, rose to 259 last week, and exceeded the corrected weekly average by 40. To different forms of violence 51 deaths were attributed; whilst 6 cases of suicide were registered. The births numbered 2392, being 24 above the average in the corresponding week of the last ten years.

THE annual report of the Society of Medical Officers of Health, just issued, shows that there are now 156 members, thirty-six of whom are metropolitan and sixty-nine extra-metropolitan, eighteen retired medical officers of health, fifteen associates, and eighteen honorary members. Dr. Buchanan, who has filled the office of president for the last two years with great advantage to the Society, has declined to be nominated again; and the Society has, in consequence, chosen Dr. Thomas Stevenson, medical officer of health for Paddington, as the president for the ensuing session. The president will deliver an inaugural address this (Saturday) evening at the first meeting of the Society, and the secretaries announce that papers have been promised for the ensuing session from Professor D. T. Ansted, F.R.S., Mr. A. Haviland, Dr. Tidy, Mr. A. Wynter Blyth, and Mr. Harry Leach.

MR. WILLIAM SNAPE, [Chairman of the Over Darwen Local Board of Health, has written to the *Liverpool Daily Post* to "emphatically deny" the correctness of a statement which appeared in that paper to the effect that Over Darwen had again been visited by an epidemic of fever, from which four persons had died. The only foundation of the report seems to be that during September four persons had been attacked by typhoid, one of whom had succumbed. Mr. Snape deprecates the circulation of unfounded rumours to the injury of a town "whose sanitary condition," he says, "will bear favourable comparison with Liverpool or a majority of Lancashire towns."

THE *Daily Telegraph* is publishing a series of interesting and useful papers on the hospitals of the metropolis. That on "St. Thomas's Hospital," which appeared on the 16th, is a good and pleasing popular account of the working of the institution. Of course these articles do not profess to be more than slight sketches, but as such they will render excellent service.

OUR readers will learn with regret that Dr. W. R. Basham, of Chester-street, Belgrave-square, many years senior physician to the Westminster Hospital, died on Tuesday last at his own residence. We are requested to inform his friends that the funeral will take place at 12 o'clock on Saturday morning at Brompton cemetery.

A MORTUARY is about to be erected by the district of Mile End Old Town.

A SEVERE epidemic of scarlet fever has been for some days existing at Stafford, and during the seven days previous to the 13th inst. ten deaths had occurred from the disease.

MEDICAL ASPECTS OF THE WAR.

IT is exceedingly difficult—indeed, it would be more accurate, perhaps, to say that it is impossible—to form any trustworthy connected account of the medico-sanitary state of the belligerent forces in Europe and Asia Minor from the fragmentary and often contradictory news which reaches us from the seat of war. The numerous extracts with which we have been favoured from letters written by members of the medical staffs of the different Aid Societies give little help in forming a definite conclusion. The writers very properly confine their information to, or the extractors only make public, such as in the main relates to the particular duties upon which the staffs are engaged. With like prudence, we must assume, the special correspondents attached to the armies in the field give only incidentally news from which the actual conditions of the armies to which they are attached, as to sickness, may be inferred. The Russians, however, stand at a disadvantage in comparison with the Turks as to rumours of losses in action and from sickness. They at least maintain some sort of statistics, and thus the news that comes from the Russian lines takes the formidable quasi-precision of figures. A recent estimate in *The Times* (more recent than the one we quoted last week) gives the Russian losses from killed, wounded, and missing at 50,000, and from sickness at some 10,000 to 20,000 more, since the opening of the war, out of a force of 200,000 men. Then we learn from Constantinople (!) under date the 12th October, that the Russian troops in the Shipka Pass were dying from cold and want of proper food at the rate of twenty daily. On the other hand, it is to be noted that a recent return of the Russian Red Cross Society shows that the whole of the hospital accommodation provided by them for the army in Bulgaria was not as yet occupied, some 3000 beds being vacant; and from other sources it is to be inferred that the stress upon the hospital accommodation of the Russian army has not been such as might be expected if about a fourth of the army had passed through the wards in a space of about four months. But the fact that the returns of sick and wounded which were originally published in the Russian journals have apparently come to an end raises an uncomfortable suspicion that the medico-sanitary condition of the troops is worse than the military authorities care to make known. Indeed, a telegram from *The Times* correspondent at the Imperial head-quarters, dated Oct. 9th, mentions, on apparently trustworthy information, the prevalence among the troops of fever, dysentery, and gangrene to an alarming extent. The Turks make no pretension to statistics, and hence the most determined estimator is left in the lurch in his attempt to form conceptions of the probable losses of their forces since the opening of the war. That the losses on both sides, both in action and from sickness, have been very considerable, there can be little doubt, but it may be questioned whether losses so serious on the Russian side as those estimated in *The Times* could have happened without some more definite information having come to hand than, so far as we know, exists. We have had occasion, more than once, to describe the imperfection of the Russian commissariat arrangements and the wretched sanitary condition of their camps, but hardly anything comparable to the neglect of the same matters which is found among the Turkish forces has come to our knowledge, while the care given to the sick and wounded by the Russians is almost wholly wanting with the Turks. Scurvy has not yet been reported among the Russian troops, and only in the latest telegrams is dysentery noted; while both diseases have been for some time present among the Turkish troops.

At the best, it is to be inferred that both belligerent armies are suffering to a large extent from the medico-sanitary contingencies of the war; but there is some reason to fear that the Turkish army is suffering to a much greater extent from them than the Russians. Few things in the course of the war have been more deplorable than the reckless manner in which the unequalled capabilities of the Turkish soldiers in adapting themselves to the exigencies of campaigning, in a medico-sanitary sense, have been sacrificed by an incompetent military administration.

A very complete sanitary train, organised at the cost of the Queen of Wurtemburg, under the supervision of Dr. Landerberger, principal physician of the Hospital of St. Catharine, aided by Dr. Albert Sigel, has arrived at Bucharest. The train consists of nineteen carriages, of which twelve are devoted to the sick and wounded, and the remainder to the staff, stores, &c. Each of the carriages devoted to patients is fitted up with ten swing beds, armchairs, tables, and has assigned to it a proper number of dressing-gowns, slippers, and even fans. Curtains have been substituted for doors in these carriages, the experience of the present war having shown that this was desirable, with regard to ventilation, in the transport of the wounded.

The following is an extract from a letter received by Colonel Loyd Lindsay, from Mr. A. K. Loyd, the agent of the National Aid Society:—

"Bucharest, Saturday evening, 29th Sept., 1877.

"With regard to aid outside Bucharest, I must tell you just the system adopted in transporting the sick and wounded from the front, and then you will understand what I have done, and what I propose to do, in meeting the wants of the various points of transit. All the wounded and sick of the Russian army are sent across the Danube by the bridge from Sistova to Zimnitza. From Zimnitza they come by road in country carts, along the north bank to Fratesti, Giurgevo being occasionally bombarded by the Turks. Fratesti, you will see by the map, is a station on the line from Giurgevo to Bucharest, and is about five miles from Giurgevo. From Fratesti they pass to Bucharest, and thence by Braila and Jassy, into the interior of Russia. The Roumanians are sent across the river at Turnu-Magurelle, and there are various stages on the road from thence to Bucharest, or other parts of Roumania, at which they are received in temporary hospitals on their way to their homes, so that, following the line of the river from east to north, we have three cardinal points. (1) Fratesti; (2) Zimnitza, with the opposite town of Sistova; (3) Turnu-Magurelle. I have resolved that the stores shall be deposited at these three points, and that by personal inquiry, so far as possible, into the need existing at the places dependent on those points, to find out which cases of goods (they are all numbered, and the numbers noted in the invoice) had better be given to the surgeons, doctors, and sisters of charity in charge of various places where there are wounded. I have already visited Fratesti, the route I have indicated being that which is taken by the officers and men going to the front, and the line being a single pair of rails, with loops at the stations for trains to pass each other. The progress along the railway is very slow. I started for Fratesti on Wednesday morning last; numbers of guards were going forward by the train, and among other distinguished fellow-travellers I may mention General Skoboleff and the veteran General Todleben. Arrived at Fratesti about 2 P.M. I was introduced to Mons. Pisareff, the head of the Red Cross, who took me into his hut, gave me bread and cheese, and was hospitality itself. The state of things here was very serious. The Russians could not foresee that Fratesti would be called upon to play any part in the service of the sick and wounded. If Rustchuk had fallen, their depôt would have been Giurgevo, and, in fact, it was not till the Turkish shells threatened to set fire to that town that they made Fratesti the terminus for commissariat purposes of that line. Then came the obstinate defence of Osman Pacha at Plevna, and the fighting at Chipka, and the wounded came back upon their hands in shoals. At Fratesti therefore they were unprepared, but by building five or six long wooden sheds, and putting up tents, they succeeded in getting shelter of an indifferent kind for five or six thousand men; but the wounded arrived every day, 1500 and 2000 at a time for some days, and now they are coming in hundreds at longer intervals. Consequently Fratesti has never been more than a stage at which the patients are lodged, and their wounds or ailments attended, before they are passed on inside the sheds; and in most of the tents there is no sort of furniture, and the men that have mattresses are fortunate, the greater part being on straw. As if to give me an opportunity of judging beforehand of what Fratesti will become when the rains set in, we had a heavy downfall the two nights before I started. The effect of this was that, as we approached the low ground, we could see at midday a layer of mist along the ground, and could feel the damp, cold air in spite of warm clothing and overcoats. The wounded and sick were in great want of blankets, and I came to the conclusion, in which Mons. Pisareff entirely concurred, that hospital appliances and medicines in any quantity would be out of place there, and that the best thing I could do for them was to leave them invalid diet and cases of dressing materials, and buy them blankets—in fact make it a more comfortable halting place. I succeeded in sending them 700 blankets next morning—all that I could lay hands upon at Bucharest. I have heard of some more, and have ordered them; I also sent down a supply of Liebig's extract, &c. &c., and left with them forty cases of those useful kinds of diet to use themselves, and also to forward with ambulances flying between neighbouring points. The completeness and arrangement of these cases have already become celebrated in Bucharest, where the depôt of the Russian Red Cross Society is presided over by the sister of Mons. Pisareff, Madame Demidoff."

The Czar has given directions that the students of the Imperial Academy of Medicine, now engaged at the seat of war, and who must forego the current medical session, shall not suffer in their academical career from this cause, but shall retain such scholarships and other privileges as belong to them, renewing their course of tuition when their services can be dispensed with. The Czar has also sanctioned the establishment in the Medico-Chirurgical Academy of St. Petersburg of six scholarships for the Cossacks of the Don, and three scholarships for the Cossacks of Astracan.

The balance-sheet of the Russian Red Cross Society for the month of August (August–Sept.) shows on the 1st of the month (13th August), money in hand 1,163,693 roubles. The receipts in the course of the month (13th August–13th Sept.) amounted to 886,350 roubles; the expenses were 636,046 roubles, and the balance-money at the end of the month was 1,411,998 roubles.

Dr. Pirogow, at the request of the Russian Red Cross Society, is about to enter upon an inspection of all the establishments of the Society in Bulgaria, Roumania, Bessarabia, and the South-Eastern provinces of Russia.

The following information is derived from letters received by the Stafford House Committee from their principal agent with the Turks, Mr. Barrington Kennett, and from different members of their medical staff, between the 12th and 19th September. The sections of the staff were then distributed at Constantinople, at Suleiman Pasha's head-quarters in the Balkans, with Medjib Pasha's division beyond Rasgrad, at Prince Nassau's head-quarters in the Shumla district, at Varna, Adrianople, and Philippopolis. All the sections had been hard at work, several upon the field of battle. The soup-kitchens for the sick and wounded in transit, established at Tchorlow and Constantinople, were working exceedingly well. That at Constantinople had been visited by Nouri Pasha, the president of the Medical Council, and several members of the Council, who expressed themselves highly satisfied with it. It was difficult to make the wounded here believe that the good things given to them from the soup-kitchen came from the Infidel and not from the Sultan. The cost per head for soup, coffee, bread, and, if necessary, milk, was at Constantinople a piastre and a half (threepence), all included; at Tchorlow slightly more. Baron Mundy, inspector-general of hospitals in Austria, had arrived in Constantinople, and volunteered his help to Mr. Barrington Kennett. A great difficulty had been experienced in the want of larger transport trains, and in the absence of any good government organisation for utilising in a systematic manner the arabas (native waggons) which had brought up biscuits to the front and returned safely. The base of operations for the military supply-trains of Suleiman Pasha's army being the Yeni Zaghra station, while the wounded were sent in another direction to Philippopolis, accounts in some measure for an utter break down in the transport arrange-

ments. Drs. Stoker and Weller's transport was for some days the only properly organised train attached to an army of 40,000 men. It was proposed to improve the transport service, not by organising new trains, but by strengthening the existing trains. The state of things at Yeni Zaghra, on the 23rd of August, may be gathered from the following extract from a note of Dr. Stoker's: "On entering the town," he writes, "I was obliged to dismount and lead my horse, the streets were so strewn with wounded, dead, and dying to whom it seemed not the slightest attention was being paid. I saw the head of the medical staff, who told me that there were only four doctors and surgeons to attend nearly 6000 wounded. Mr. Pratt reported (1st Sept.) the Turkish hospital at Eski-Djuma to be inadequately provided in every respect. It was established in a Bulgarian school, and the wounded suffering from gangrene and from fever were mixed indiscriminately with the wounded who were in a good state. The military hospital at Rustchuk, under Ohannes Bey, a temporary structure containing five or six hundred beds, Dr. Hayes found (30th August) to be well organised in all its details, except such as were sanitary. Five hundred sick were there, but no serious cases. A large hospital at Shumla at this time, making up 2000 beds, contained 1299 patients, of whom 100 were suffering from wounds. Nothing is said as to the organisation of this hospital. Dr. Bond Moore, writing from Adrianople (8th Sept.) reported matters going on there as to the wounded pretty smoothly, but no account as to work done could well be given, the patients being simply passed through the hospitals on the way to Constantinople, where they were removed as quickly as possible. At Philippopolis, Dr. Neylan and his colleagues found (4th Sept.) 2000 wounded, distributed in thirty buildings, scattered in various parts of the city, and good work was being done among them by several Greek surgeons. Ibrahim Pasha, the commandant, convened a meeting of the doctors in the place, and it was agreed that the hospitals should be placed under the supervision of Dr. Neylan and Dr. Menassin, both belonging to the Stafford House Committee's staff. Further, Ibrahim Pasha ordered that all neglect on the part of the Turkish surgeons and dressers should receive severe, and if necessary "*capital* punishment." The first step taken by Drs. Neylan and Menassin was to reduce the number of hospitals to nine, 600 of the less severely wounded cases being sent away to Constantinople. On the 12th of September Drs. Cruikshank, Cheyne, and Jolly, of the National Aid Society, were with the south wing of Mehemet Ali Pasha's army (Shumla district), Drs. Wattie, Busby, and Boyd (Lord Blantyre's staff) in charge of a transport corps with the north wing, and Drs. Beresford and McQuean with transports were stationed at a village in rear of the centre, with orders to move in the direction of any fighting. Dr. Hayes had charge of the transport on the Rustchuk-Varna railway. The Varna and Rustchuk hospitals were all full. Dr. McQuean, writing from Cherissa, on the 13th of September, notes that in the Turkish temporary hospital there the Turkish surgeons did not amputate even a finger, when needed. They first explained this by stating that they had not proper instruments, but afterwards averred that they had received orders not to operate. "Dr. Beresford and I," he remarks," have come to the conclusion, after communication with Busby, Wattie, and Cruikshank, that we must get up our tents and join a division, as it is impracticable to work in the villages." Dr. Hayes received at Varna on Sept. 9th—he himself having to assist in removing them from the trains—553 wounded, on the 10th 229, and on the 11th 690. All the cases were very severe. The Red Crescent Hospital at Varna had received 49 wounded from the 2nd to the 12th of September. News from Sophia, according to information from Dr. Bond Moore at Kezanlik, dated September 17th, described the place as crowded with wounded, gangrene prevalent among them, and deaths numerous.

A telegram from Constantinople dated the 11th October announces that a Stafford House Committee ambulance corps had entered Plevna with the relieving forces. The corps had been escorted from Orchanie by the Circassian guard of the Sultan; and on its departure from Orchanie the band of the guard played "God save the Queen," and the officers saluted in honour of England and the Committee.

MEDICAL STUDENTS.

THE annual registration of those gentlemen pursuing their professional studies at the eleven recognised metropolitan hospitals has just been completed, and the usual return forwarded from the Royal College of Surgeons to Mr. Charles Hawkins, F.R.C.S., the Government Inspector of the London Anatomical Schools.

The following analysis of the present and past registrations of students will no doubt be read with interest, especially as from what took place on Thursday at a meeting of the Council of the College, we have reason to believe that henceforth, in deference to the wishes so frequently and persistently expressed by this journal, as well as by our contemporaries, students and officials will be relieved from wasting so much valuable time on what is now a useless occupation.

The total number of students registered amounts to 1879, against 1793 last session, showing an increase of 86, and distributed as follows, viz.:—

	1877.		1876.	
	Total.	New Entries.	Total.	New Entries.
St. Bartholomew's	394	149	374	131
Guy's	338	112	317	95
University College	269	64	279	79
St. Thomas's	187	52	177	43
St. George's	128	35	136	33
The London	123	46	123	35
King's College	115	40	105	28
The Middlesex	112	35	101	38
St. Mary's	102	26	83	26
Charing-cross	82	29	70	29
The Westminster	29	9	28	9

It will be seen that there is a decrease in the number of new entries or freshmen at University College and Middlesex Hospitals, and that at the Charing-cross, St. Mary's, and Westminster Hospitals there is exactly the same number this session as at the last. In 1857, the total number of students at our metropolitan hospitals amounted to 1038, including 353 first year's men; in 1867, there were 1125, including 355 first year's men; and in the present year, as already shown, 1879, including 597 first year's men.

As the present will, in all probability, be the last registration, we have compiled with some trouble the following analysis, which will, no doubt, be read with interest:—In 1850 there were 1001 metropolitan students; in 1851, 1087; in 1852, 1093; in 1853, 1084; in 1854, 1072; in 1855, 1093; in 1856, 1067; in 1857, 1038; in 1858, 1021; in 1859, 954; in 1860, 1228;[1] in 1861, 1116; in 1862, 1045; in 1863, 1020; in 1864, 995; in 1865, 1013; in 1866, 1027; in 1867, 1125; in 1868, 1178; in 1869, 1241; in 1870, 1298; in 1871, 1475; in 1872, 1946; in 1873, 1650; in 1874, 1745; in 1875, 1769; in 1876, 1744; in 1877, 1879.

The following are the returns supplied by the schools themselves:—

	New.	Occasional.
St. Bartholomew's	150	8
Guy's	112	3
University College	67	0
St. Thomas's	49	24
London Hospital	45	20
Middlesex	43	11
St. George's	42	5
King's College	42	0
Charing-cross	34	5
Westminster	10	6
Owens College, Manchester	57	0
Leeds	37	3
Liverpool	18	5
Durham	16	7
Bristol	11	0

[1] A great rush to escape the operation of the new regulations.

A CENTENARIAN. — It is stated that there is at present a woman named Hennessy in Newcastle West Union Workhouse who has reached the extreme age of 110 years. This woman can knit and sew, and her mental faculties appear to be almost unimpaired.

Correspondence.

"Audi alteram partem."

STARVATION OR SYPHILIS.

To the Editor of THE LANCET.

SIR,—A case reported in the *Daily News* of this date is worthy of remark from two points of view. In the first place, here is a medical witness who, with the Penge case still fresh in his memory, does not scruple to maintain that emaciation unaccompanied by traces of organic disease is sufficient proof of starvation. He is so sure of it that he makes light of the fact that his opinion involves a charge of manslaughter against someone. This is surprising enough; but such a statement is more than surprising, it is highly reprehensible, when made in the face of these two facts:—(1) That the child had been under treatment at hospital for congenital syphilis; and (2) that (being only eleven weeks old) it had been "properly" fed on *corn-flour and biscuits*. Either of these two causes would have been quite sufficient to account for death: the combination of the two left the unfortunate child little chance of life. The error of the witness is based on the assumption that any disease sufficient to kill must leave obvious traces behind it. Is he not aware that an infant may die of vomiting or diarrhœa and be found after death to be devoid both of every particle of fat and of any organic lesion? In truth, his mind appears to have been full of "mesenteric disease," that bugbear of a past generation. Anyone who has seen much of children's diseases will allow that ninety-nine cases out of every hundred of so-called tabes mesenterica are simply cases of inanition, probably with vomiting and diarrhœa, resulting from such "proper" feeding as is above described.

The second point of interest in this report is the rough and ready censure expressed by the coroner, who "at once condemned the practice of doctors giving such loose certificates." One is tempted to ask, "Where is the looseness?" What can be much more definite than a certificate which ascribes the cause of death to congenital syphilis and convulsions? If the looseness complained of were found in the words "was said to have died," it may suffice to remind the coroner that a medical man is not required to certify the fact of death, but only the probable cause. In the form of certificates supplied by registrars, a blank is left after the words "that he died," with the following note: "Should the medical attendant not feel justified in taking upon himself the responsibility of certifying the fact of death, he may here insert the words 'as I am informed.'" The certificate, therefore, that the child had been treated at the hospital for congenital syphilis, and was said to have died in convulsions, was in perfectly proper form. What the coroner meant to say, no doubt, was that a certificate should have been refused; and I happen to know that this is not the first time he has made such a remark in a case of this kind. But surely only very suspicious circumstances would justify a refusal of the certificate. If this step were taken every time that an infant succumbed to "proper" feeding on corn-flour and biscuits, there would indeed be no lack of work for the coroner. Even in the most suspicious cases, those of illegitimate children put out to nurse, there is rarely so much evidence of neglect as to entitle anyone who sees them as out-patients of a hospital to refuse to certify the death.

A doctor is neither a detective officer nor a public prosecutor, and the onus of demanding an inquest should not be laid upon his shoulders. He gives a certificate (as compelled by law) of the cause of death "to the best of his knowledge and belief," and does not claim infallibility in his diagnosis, or a knowledge as to whether or not neglect may have contributed to death. If there are any suspicious circumstances, let them be brought before the coroner by the neighbours or others who may have noticed them. Even then the doctor's certificate will be true as far as it goes, if he has confined himself to symptoms observed and to probable deductions from them.

If the cause assigned on the certificate be not satisfactory, or there be any ground of suspicion, it should be the duty of the registrar, after first referring the matter back to the medical man who signed it, to draw the attention of the coroner to the case. At any rate some such course should be taken with regard to hospital out-patients. Meantime, let us hope that Dr. Hardwicke will learn to be more sparing in his censures.

I am, Sir, yours truly,

AN ASSISTANT PHYSICIAN TO A HOSPITAL FOR CHILDREN.

Oct. 8, 1877.

"SUSSEX COUNTY HOSPITAL."

To the Editor of THE LANCET.

SIR,—The medical staff of this hospital cannot but express their unfeigned surprise that a medical journal, of the deservedly high standing of THE LANCET, should have inserted such a sensational article as appears in your last week's issue under the above heading. The paragraph in question contains charges of the most serious character, reflecting upon the sanitary arrangements of the medical officers of a hospital which, with singular contradiction, you are pleased to say has "for years well deserved the fame of one of the best in England,' such charges being founded wholly upon an *ex-parte* statement. The medical staff are quite prepared to justify the steps they have taken, sanctioned as they were by a large majority of the Committee of Management; but for the present they must content themselves with indignantly repudiating the calumnies now cast upon them in the pages of THE LANCET, and at the same time ask your numerous readers to suspend their judgment until the real facts of the case are laid before them.

Signed on behalf of the medical staff,

WILLIAM KEBBELL, M.D., Chairman.

Sussex County Hospital, Oct. 17th, 1877.

*** We print the above letter to prevent the slightest suspicion of unfairness, but it has obviously no bearing on the question raised by our remarks.—ED. L.

THE USE OF ALCOHOL.

To the Editor of THE LANCET.

SIR,—It seems a pity that the evidence of such men as Sir George Burrows and Mr. Jonathan Hutchinson could not be added to that of the distinguished physicians who were examined before the select committee of the House of Lords. If my memory serve me correctly, Sir George, at a temperance meeting held in the East-end of London a year or two since, informed his audience that he considered the use of alcohol in moderate quantity necessary to the majority of adult dwellers in large towns. Mr. Hutchinson would, I believe, limit the use of alcohol in health to the adult male portion of the community. If therefore, Sir, the temperance societies "distribute broadcast the medical evidence, and especially that of Sir William Gull," might it not be well for them—with that love of truth which, no doubt, characterises them—at the same time to lay before the public the views of such men as Sir George Burrows and Mr. Hutchinson?

The following questions suggest themselves to the thoughtful practitioner. Is it not somewhat early in the day to commence the wholesale recommendation of total abstinence to temperate people. Does our knowledge really warrant such a course, and might it not years hence be followed by a humiliating reaction (by no means the first on the part of the profession) in favour of moderate and seasonable drinking? Are we ourselves willing to give up using alcohol?—for precept without example would be absurd.

Yours faithfully,

October 16th, 1877. IN MEDIO.

SOUTH DURHAM AND CLEVELAND MEDICAL SOCIETY.—The following gentlemen have been elected office-bearers for the session 1877–78:—President: J. R. Fothergill, M.D.; Vice-Presidents: R. W. Foss, M.D., R. Smith, M.D.; Hon. Secs.: J. A. Malcolmson, M.D., Mr. G. Middlemiss; Committee: Messrs. John Dale, Edward Jackson, G. Longbotham, J. Farquharson, Jas. Mackie, and Drs. J. W. Eastwood, S. Gourley, T. R. Pearson, and W. J. Williams.

Medical News.

QUEEN'S UNIVERSITY IN IRELAND.—The following degrees were conferred last week by the Duke of Leinster, Chancellor of the University:—

DOCTOR IN MEDICINE. — First Honour Class: William Allen, James Clarke, William Whittle. Upper Pass Division: Gervase Robert Percy, William Sprott. Lower Pass Division: Daniel F. Barry, Archibald R. Bland, William H. Bracken, George H. Bull, Patrick M'Carleton, John P. Carmody, William Corry, Thomas R. Denham, Robert Donaldson, Hugh Donovan, Robert Donovan, Isaac Dundee, J. Kent Fairclough, Denis Harrington, Chas. Knight, Joseph Lawlor, Robert Love, Michael Lyden, John Megarry, Thos. O'Brien, Patrick O'Connor, Henry O'Neill, Wm. Quayle, Robert Robinson, John Sandiford, James Stuart, Garnett Tatham, David Taylor, James Tidbury, Henry Thompson, Wm. Thornhill, Henry Tomkins, Francis Walmsley, John Walsh, Edward White, James Williams, John Wilson, Thomas Withers, Charles Workman.

MASTER IN SURGERY. — J. J. Adams, William Allen, Daniel Barry, Archibald Bland, David Bradley, George Bull, John Carmody, James Clarke, William Corry, Thomas Denham, Robert Donaldson, Hugh Donovan, J. Kent Fairclough, Denis Harrington, Joseph Lawlor, Robt. Love, Michael Lyden, John Mulrennan, Thomas O'Brien, Patrick O'Connor, Henry O'Neill, Gervase Percy, William Quayle, Robert Robinson, John Sandiford, William Sprott, Jas. Stuart, Henry Thompson, William Thornhill, James Tidbury, John Walsh, Edward White, James Williams, Thomas Withers, Charles Workman.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND. — The following gentlemen obtained the licences in Medicine and Midwifery at the October examinations:—

MEDICINE. — Charles Edw. Abbott, Patrick Canavan, Lawrence Finegan, Matthew Kehoe, Joseph M'Cann, Stephen Mackey, Rawdon Macnamara, William Miley, Daniel Mitchell, Joseph Nicholson, Wm. Owen, Evelyn Pollard, Thomas Russell, James Smith.

MIDWIFERY.—Charles Abbott, P. Canavan, L. Finegan, M. Kehoe, Joseph M'Cann, Stephen Mackey, Rawdon Macnamara, William Miley, Daniel Mitchell, Joseph Nicholson, William Owen, Evelyn Pollard, Thomas Russell.

THE statue of Dr. Graves, by Mr. Joy, to be placed in the hall of the College of Physicians, Ireland, has been completed, and will shortly be inaugurated.

THE officers of the various Friendly Societies in Darlington have held a meeting, and unanimously passed a resolution to establish a Friendly Societies Medical Association for the town and neighbourhood.

SCHOLARSHIPS AND EXHIBITIONS.—At Guy's Hospital in September, 1877, the Open Scholarship in Arts was gained by W. Hamilton Hart, Streatham (C. Haig Brown, *proxime accessit*). The Open Scholarship in Science was awarded to Edwin Leonard Adeney, Reigate.—At University College, the Medical Entrance Exhibitions of £30, £20, and £10 per annum, tenable for two years, have been respectively awarded to Mr. W. H. Evans, Mr. P. F. Moline, and Mr. F. de C. Skeete.

OXFORD UNIVERSITY.—Examinations for the degree of Bachelor of Medicine will be holden early in December. Candidates are requested to forward their names to the Regius Professor of Medicine, before Nov. 24th. Also, it is proposed to hold an Examination in Preventive Medicine and Public Health, in conformity with Statute XII., Titulus Sup. XIX., p. 291, ed. 1877. The examination is open to all persons who have taken the degree of Bachelor of Medicine in the University of Oxford. Candidates are requested to send their names to the Regius Professor of Medicine on or before Nov. 10th.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—At the annual meeting of the College held Oct. 16, the following office-bearers were elected for the ensuing year:—President: Dr. Patrick Heron Watson. Secretary and Treasurer: Mr. Joseph Bell. Librarian: Dr. Daniel Wilson. President's Council: Dr. Andrew Wood; Dr. James D. Gillespie; Mr. James Spence; Mr. William Walker; Dr. Henry D. Littlejohn; Dr. John Smith; Mr. Joseph Bell (ex-officio). Examiners: Dr. Archibald Inglis; Dr. Peter D. Handyside; Dr. James D. Gillespie; Dr. Henry D. Littlejohn; Dr. Patrick H. Watson; Dr. Daniel Wilson; Dr. John Smith; Dr. Argyll Robertson; Mr. Joseph Bell; Dr. John Duncan; Dr. Robert J. B. Cunyngham; Dr. Alexander G. Miller. Assessors to Examiners: Mr. William Brown; Mr. James Spence; Mr. William Walker; Dr. James S. Combe. Conservator of Museum: Dr. Robert J. Blair Cunyngham. Clerk: Mr. James Robertson. Officer: John Dickie. Assistant to Conservator: Mr. James Grandison.

BOOKS ETC. RECEIVED.

F. J. Gant: A Guide to the Examinations at the Royal College of Surgeons of England.
The Sanitarian. September.
C. H. Piesse: Chemistry in the Brewing-room.
Dublin Journal of Medical Science. October.
Dr. C. B. Radcliffe: Proteus, or Unity in Nature.
Drs. D. B. St. John Roosa and Dr. E. T. Ely: Ophthalmic and Otic Memoranda.
T. Spencer Wells: Surgery, Past, Present, and Future.
National Portrait Gallery. Part LXXIV.
The Westminster Review. October.
The Canadian Journal of Medical Science. October.
E. Wilson: Our Egyptian Obelisk—Cleopatra's Needle.
E. Atkinson: Ganot's Elementary Treatise on Physics.
Dr. A. Ransome: Present Position of State Medicine in England.
Medicinal Plants. Part XXV.
British Journal of Dental Science.
New Orleans Medical and Surgical Journal October.

Medical Appointments.

BENNETT, W. C. S., L.D.S.R.C.S.E., has been appointed Medical Tutor at the Dental Hospital of London Medical School.

BENNETT, W. H., L.R.C.P.L., M.R.C.S.E., has been appointed a Surgeon to the Belgrave Hospital for Children, vice Pick, resigned.

BRACKENRIDGE, D. J., M.D., F.R.C.P.Ed., Assistant-Physician, has been appointed a Physician to the Royal Infirmary, Edinburgh, vice Haldane, whose term of office has expired.

BROOK, C., M.R.C.S.E., L.S.A.L., has been appointed an Honorary Surgeon to the Lincoln Lunatic Hospital, vice Broadbent, deceased.

COCKS, C. C., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Ross Rural Sanitary District, at £60 per annum for three years.

CRIPPS, W. H., F.R.C.S.E., has been appointed Assistant-Surgeon to the Royal Free Hospital.

DALY, T., L.R.C.P.Ed. & L.M., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the No. 7 District of the South Molton Union, vice Sanders, resigned.

DITTMAR, W., F.R.S.E., Lecturer on Chemistry at Anderson's College, Glasgow, has been appointed the additional Examiner in Chemistry at the University of Edinburgh, vice Dewar, resigned.

GOURLEY, S., M.D., F.R.C.S.Ed., has been appointed Medical Officer of Health for the West Hartlepool Urban Sanitary District, vice Oldham, resigned.

GRIMBLY, R., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Banbury Urban Sanitary District, at £30 per annum.

HALL, M., M.R.C.S.E., L.S.A.L., has been appointed a Certifying Factory Surgeon for the Sheffield District, vice Arden, deceased.

HUGHES, P. W., M.B., C.M., L.R.C.P.Ed., has been appointed a Physician to the Carmarthenshire Infirmary, Carmarthen, vice Lloyd, deceased.

HUTCHINSON, J., M.B., has been appointed a Resident Surgical Assistant to the Western Infirmary, Glasgow.

JEFFERY, E., M.D., has been reappointed Medical Officer of Health for the Lowestoft Urban Sanitary District, and Superintendent of the Sanatorium, at £120 per annum.

JONES, R. H., M.R.C.S.E., L.R.C.P.L., has been appointed Assistant House-Surgeon to the Northern Hospital, Liverpool, vice Thompson, resigned.

MACDONALD, A., M.D., F.R.C.P.Ed., F.R.C.S.Ed., has been appointed a Physician to the Royal Infirmary, Edinburgh, vice Duncan, resigned.

MACLAGAN, T. J., M.D., has been appointed an Examiner in the Practice of Medicine and Pathology at the University of Aberdeen.

MACLEAN, J. H., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Ashborne Urban Sanitary District, vice Greaves, whose appointment has expired.

MCMURRICH, M., M.A., has been appointed a Resident Medical Assistant to the Western Infirmary, Glasgow.

MACPHAIL, D., M.B., has been appointed a Resident Medical Assistant to the Western Infirmary, Glasgow.

MCRURY, J., M.B., has been appointed a Resident Surgical Assistant to the Western Infirmary, Glasgow.

MOORE, F. F., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer of Health for the Burnham Urban Sanitary District, vice Phelps, whose appointment has expired.

ORR, A. B. S., M.B., has been appointed a Resident Surgical Assistant to the Western Infirmary, Glasgow.

PATERSON, Mr. R. H., has been appointed a Resident Medical Assistant to the Western Infirmary, Glasgow.

PICKUP, W. J., M.R.C.S.E., L.S.A.L., has been appointed Resident Surgeon to the Bedford General Infirmary, vice Hacon, whose appointment has expired.

PRESCRAVE, D. C. W., L.F.P.S.G., has been appointed Medical Officer of Health for the Towcester Rural Sanitary District, at £10 10s. per annum and £2 2s. per case.

REID, R. W., M.D., has been appointed an Examiner in Anatomy at the University of Aberdeen.

ROGERS, C. C., M.R.C.S.E. & L.D.S., has been appointed Demonstrator of Dental Operations at the Dental Hospital of London Medical School.

STURGE, W. A., M.D., M.R.C.P.L., has been appointed Assistant-Physician to the Royal Free Hospital.

STYRS, W., L.R.C.P.Ed. & L.M., M.R.C.S.E., has been appointed Medical Officer of Health for the Mexborough Urban Sanitary District, till the 24th June, 1880, at £40 per annum.

URQUHART, J., M.D., has been appointed an Examiner in Chemistry and Physiology at the University of Aberdeen.

VERLING, W. K., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, &c., for the Newmarket Dispensary District of the Kanturk Union, co. Cork, vice Donaldson, resigned.

WILL, J. C. O., M.D., has been appointed an Examiner in Surgery and Materia Medica at the University of Aberdeen.

Births, Marriages, and Deaths.

BIRTHS.

BELLINGHAM.—On the 1st inst., at Castle-street, Dudley, the wife of J. Bellingham, of a daughter.

HALDANE.—On the 8th inst., at Braemar, the wife of William Haldane, M.D., of a son.

HOPKINS.—On the 15th inst., at Hovingham House, Highbury New Park, the wife of Alfred lloyd Hopkins, M.R.C.S.E., of a son.

LITTLE.—On the 7th inst., at Dingle-hill, Liverpool, the wife of William Little, M.D., of a son.

LUPTON.—On the 2nd inst., at Stratford-on-Avon, the wife of Harry Lupton, L.R.C.P.L., of a daughter.

STOCKER.—On the 9th inst., at Peckham House, Peckham, the wife of Alonzo H. Stocker, M.D., of a daughter.

MARRIAGES.

CULLIMORE—HIRSCH.—On the 12th ult., at Ootacamund, India, Daniel H. Cullimore, F.R.C.S.I., Surgeon, Madras Army, to Emma Esther, daughter of J. F. Hirsch, Esq., of Oak Lodge, Kilburn, London.

LITTLE—SHAW.—On the 10th inst., at Buglawton Church, Cheshire, by the Rev. E. Harwood Cooke, M.A., Vicar of Urmston, assisted by the Rev. W. Besant, B.A., Vicar of Buglawton, David Little, M.D., of Manchester, to Marian (Minnie), second daughter of Anthony Shaw, of Bank House, Congleton.

MADELEY—BARTON.—On the 16th inst., at St. Michael's, Coventry, by the Rev. G. B. Bennett, M.A., Vicar of St. Peter's, Hereford, and Rector of St. Owen's (uncle of the bride), assisted by the Rev. Canon Baynes, M.A., Vicar of the Parish, and the Rev. J. W. Johnson, M.A., of Leamington, George Henry Madeley, Surgeon, Royal Marine Light Infantry, eldest son of the late George Edward Madeley, of Kensington, to Katharine Helen, only daughter of the late George S. Barton, of Coventry.

DEATHS.

BEACH.—On the 5th inst., at Swindon, Henry Beach, M.R.C.S.E., aged 68.

BONNEY.—On the 13th inst., at Queen's Elm, Brompton, Francis Augustus Burdett Bonney, L.R.C.S.Ed., aged 73.

CROMPTON.—On the 4th inst., Harold Crompton, M.R.C.S.E., L.R.C.P.Ed., of Bradshaw, Bolton-le-Moors, Lancashire, aged 30.

DAVIES.—On the 7th inst., at Ryde, Frederick Davies, M.D., of Gower-street, aged 68.

HICKMAN.—On the 6th inst., at Edinburgh, Francis Hickman, aged 22.

HUGO.—On the 29th August, at Teignmouth, William Henry Hugo, L.S.A.L., aged 62.

JOHNSON.—On the 14th inst., at Grove Lodge, Fulham, James Johnson, M.R.C.S.E., aged 65.

MCCARTHY.—On the 8th inst., at Bandon, co. Cork, Charles McCarthy, M.D., aged 61.

NEALE.—On the 14th inst., at Worksop, William Michael Neale, M.R.C.P.Ed., L.S.A., aged 64.

SIMPSON.—On the 7th inst., at Great Malvern, James Murray Simpson, L.R.C.P.Ed., aged 70.

SLADEE.—On the 9th inst., at Grange-road, Darlington, George Revely Slader, M.R.C.S.E., aged 58.

SMITH.—On the 7th inst., at Croydon, John Simin Smith, Surgeon, aged 84.

[N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.]

Notes, Short Comments, and Answers to Correspondents.

"BURIALS IN GAOLS."

UNDER this title *The Times* very properly and opportunely draws attention to a report by the Rev. Mr. Jessopp, Chaplain of Horsemonger-lane Gaol, in which he points out that while burial within towns is prohibited by statute, "in this gaol thirteen bodies lie buried side by side in a double row, within a few feet of the well which, until recently, supplied the whole establishment with drinking-water. A few feet further off three other bodies have been recently deposited." The condition of affairs is deplorable, and matters must be incomparably worse at Newgate. There is no longer reason for burying "within the precincts" of a gaol. The purpose of this procedure was to prevent the resuscitation of criminals imperfectly hanged, or the removal of bodies with sinister intentions. At the present time death is secured by prolonged hanging, and the corpse might very well be buried in a cemetery, if thought desirable, at night, without stone or mark to point out the position of the grave.

Mr. J. Ashley should apply to the Secretary of the Stafford House Committee, to Colonel Loyd Lindsay, or to the Secretary of the Society for Aid to the Sick and Wounded, 14, Cockspur-street, S.W.

607.—The subject is scarcely of sufficient importance to be discussed in our columns.

DEVELOPMENT OF PUNGENT AMMONIACAL GAS.

To the Editor of THE LANCET.

SIR,—The pungent ammoniacal odour emitted from the skate is due to the formation of trimethylamine (C_3H_9N), which is also found in the liquor in which salt herrings are preserved. I believe it has not, however, been yet clearly established whether it is trimethylamine or one of its isomerides. Attention was directed some years ago to the skate as a source of trimethylamine, when this substance was recommended for rheumatism.

Yours truly,

October, 1877. A STUDENT.

AN ATTEMPT TO EVADE AN OBLIGATION NOT TO PRACTISE.

CONSIDERING the importance of an undertaking not to practise on the part of an assistant or locum tenens, and the general honorableness with which it is observed, it is very important to report any attempt to evade it, and the bearing of the law on such attempt. A case in point was lately tried in the Chancery Division of the High Court of Justice—the case of *March versus* Farrant, and which is thus reported in *The Times*:—

"The plaintiff is a surgeon and M.D., practising at Wandsworth, and the defendant was until recently an assistant in his business. The agreement between the parties was determinable by a month's notice, and contained a provision that on the termination thereof the defendant would 'not at any time practise the business or profession of a surgeon or doctor of medicine or apothecary within three miles of the plaintiff's residence.' On the 17th of July the agreement was terminated by the plaintiff giving the defendant a month's pay in lieu of notice. Since that date the plaintiff alleged that the defendant had been going round to some of his patients, stating that he was going to set up in business for himself within half a mile of the plaintiff, and that he had actually attended some of these patients, and given them medicines. A motion for an injunction was now made to restrain him from committing any breach of the agreement. The defendant, who is not a qualified medical practitioner, denied that he had acted as a surgeon or doctor of medicine or apothecary, and that he only intended to attend midwifery cases, which were outside the agreement.

"Mr. Macrae Moir appeared for the plaintiff; Mr. E. Cooper Willis for the defendant.

"Mr. Justice Lopes was clearly of opinion that the plaintiff had proved sufficient to entitle him to an injunction in terms of the notice of motion and following the agreement.

"The costs would be disposed of at the hearing."

The above case suggests a very obvious lesson to principals—viz., that in drawing up a form of contract with an assistant, intended, among other things, to prohibit his practising in the neighbourhood, midwifery should be very specifically mentioned as a branch of practice from which he is debarred. In the absence of this, and in the present state of the law, which regards midwifery as beyond the pale of surgery and medicine and the art of the apothecary, it is evidently possible for a principal to be much injured by an assistant introduced to his patients, and to get very imperfect redress, probably at a great cost, from even a High Court of Justice.

DEGREES *versus* DIPLOMAS.

To the Editor of THE LANCET.

SIR,—I would beg, in the interests of those now about to commence their professional studies, to trespass on your valuable space regarding a matter which, I think, has not hitherto obtained the publicity it deserves. I refer to the question of University degrees. Very many students now entering the metropolitan and provincial schools will have paid a composition fee, to include all lectures required for a diploma in surgery; many of them will have rather hazy ideas about diplomas; but everyone will imagine he is going to become a doctor. Now, it will certainly be rather tantalising to some to find the truth dawning on them by degrees that at the end of their curriculum, and having obtained their surgeon's and physician's diplomas, they will have no absolute right to call themselves more than "Mr." This would be, however, a matter of small moment were it not for the significant fact that, *ceteris paribus*, in looking for public appointments young medical men holding diplomas from corporate bodies have not an equal chance with others in possession of University degrees. These are things, in my humble opinion, concerning which there should be some means of informing those about to enter the profession. The extra expense which a University course might be supposed to entail may possibly seem an objection; but this does not hold good when one can obtain the M.D. and C.M. of the Queen's University in Ireland or any of the Scotch Universities at less cost than is necessary for the medical and surgical diplomas of any two of the licensing bodies most in favour with students. I consider it a mistake to suppose that University men make better practitioners. Nevertheless, I believe I am right in stating that there is a growing prejudice among all educated people in their favour, and hoping to see this matter taken up and fully discussed,

I remain yours truly,

Oct. 10th, 1877. A SURGEON.

MR. JAMES GRAHAM'S BEQUESTS.

IN addition to those reported last week are the following:—£1000 to the Middlesex Hospital, £500 to Queen Charlotte's Lying-in Hospital, £500 to the Bethlehem Royal Hospital for Lunatics, and £250 to the General Lying-in Hospital.

Mr. Camden (Rhyl) would do well to communicate his discovery.

DE LISLE ALLEN FUND.

To the Editor of THE LANCET.

SIR,—Since our last notice of this case, Dr. de Lisle Allen, who for more than two years was incapacitated from following his profession, has died in Bethlehem Hospital. An appeal is once more made to enable his widow and daughter to keep a home, and to put them in a position to earn a livelihood for themselves.

Dr. B. W. Richardson, 12, Hinde-street, Manchester-square, is treasurer, and subscriptions will be received either by him or by the Union Bank of London, Argyll-place, Regent-street.

We are, Sir, yours obediently,

J. E. ERICHSEN, F.R.C.S., F.R.S.
BENJAMIN W. RICHARDSON, M.D., F.R.S.
J. HUGHLINGS JACKSON, M.D.
THOMAS SMITH, F.R.C.S.

October, 1877.

X. Y. Z., (Belfast.)—Read "La Patologia dell' Amore e del Sentimento in rapporto alla Genesi delle Malattie." (The Pathology of Love and Sentiment in relation to the Genesis of Disease.) The author is Dr. Oscar Giacchi, of Milan; and the publisher, Emilio Croci, of that city.

A Coventry Student.—In splay-foot the plantar arch is destroyed; the foot is therefore flat, wide, and inclined outwards.

AN ART TRIBUTE TO MEDICINE.

THE interesting old Italian town of Rovigo has just opened an Exhibition of the Fine Arts, and among the works which appeal to the sympathetic spectator is an admirable portrait of the late Signor Malagodi, one of Italy's most scientific surgeons and successful operators. The painter is the well-known Giovanni Pierpaoli, of Fano, and he has proved himself in all respects equal to his subject. The doctor stands in winter raiment, and with head uncovered; he rests one hand on some books strewn negligently on the table beside him, while with fixed eye and the searching look that was characteristic of him he has assumed the attitude he fell into almost mechanically when confronting a patient in his consulting-room. Executed after Signor Malagodi's death, his likeness has been preserved with masterly fidelity, and, whatever its destination, will always be regarded with admiration, particularly by those spectators who may happen to have been his patients or his pupils.

L. S.—Consult a practitioner. We cannot prescribe.

MEDICAL ETIQUETTE AT HASLINGDEN.

To the Editor of THE LANCET.

SIR,—If you have space, and will allow me, I should like to elicit the opinion of yourself and the profession as to whether a breach of medical etiquette has been committed under the following circumstances, as I do not remember any similar case to have been reported since I became a member of the profession.

My appointment as medical officer of health to the Haslingden Local Board expiring on the 29th of September last, it became necessary that the forms of the law should be complied with; hence a formal advertisement was inserted in the *Preston Guardian*, which, as nearly as I can remember, was as follows:—

"The Haslingden Local Board will, at their meeting on the 3rd October next, proceed to the election of a medical officer of health and an inspector of nuisances for the district. (signed). Thos. Woodcock, Jun., Clerk."

As I have several times been reappointed in the rural district, of which I am also medical officer, and no notice having ever been taken by other medical men of these formal advertisements, I, this time, thought the same would be the case, and did not even send in an application for re-appointment. It came out, however, to my surprise, on the 3rd instant that I had indeed reckoned without the host; for an application was put in from a gentleman who settled here about twelve months since, stating that he was willing to take the appointment at £30 per annum, being £41 less than my old salary. Of course the offer was tempting, particularly to the so-called economists, who are always to be found on every Local Board, and he obtained five votes; but as seven votes were recorded in favour of my re-election, I was reappointed at my old salary.

I put these facts before the profession with out note or comment, and shall be glad for any expressions of opinion thereon.

I am, Sir, yours truly,

Haslingden, Oct. 9th, 1877. J. A. HARRISON, M.D.

*** It was quite within the gentleman's right to offer himself for any vacancy duly advertised; but it is to be greatly regretted that any medical man should offer his services on terms lower than those already given by bodies not apt to err in the direction of excessive payment for medical services. He should consider his obligation to raise the public estimate of medical service, not to lower it.—ED. L.

H. B. B.—The client is responsible for the fees for attendance. Our correspondent should treat the later payment as on account of the £3 0s. 6*d*.

A Student should write to the Honorary Secretary of the College of Physicians, Edinburgh, Dr. Wyllie, 9, Howe-street, Edinburgh.

TYPHOID—IS IT INFECTIOUS?

To the Editor of THE LANCET.

SIR,—Although your correspondent ("A Sufferer from Typhoid") of last week mentions no name, I think I may announce myself the surgeon alluded to. In writing upon abstruse subjects, and so long as he avoids personalities, a man may be justified in writing anonymously; but when he casts imputations on individuals, his shielding himself under a *nom de plume* is an act of cowardice. "A Sufferer from Typhoid" states what he calls the facts of his case; but if he had been at the committee meeting which he mentions (and at which, from his accuracy as to what took place there, he might have been), he would have known that there were surroundings connected with those facts which materially altered their complexion. One thing more I may say in justice to our committee. They did *not* pass a resolution that "typhoid fever is infectious," as your anonymous correspondent states (what a comfort if some other vexed medical questions could be settled by so simple a proceeding!); but they added to their bye-laws that "cases of typhoid fever should be inadmissible."

I may inform "A Sufferer" that a week after this case occurred my partner had a case of typhoid fever in a domestic servant. She was sent into our county hospital by the consent of one of the physicians, and placed in one of the general wards. I am, Sir, your obedient servant,

Cirencester, Oct. 17th, 1877. EDWARD CRIPPS.

To the Editor of THE LANCET.

SIR,—The letter of "A Sufferer from Typhoid" reopens the old ground of the infectious or non-infectious nature of typhoid. For his information I beg to state that I know a large hospital in which cases of typhoid, of the diagnosis of which there is no doubt, are not transferred to the fever wards, but are treated in the general wards. The case to which he refers would have on this precedent been admissible into the cottage hospital. The committee and the "whole town" have no means of forming an opinion on the point. In conclusion, I may remark that it was most likely from the cottage, and not from the patient, that the honorary surgeon of the hospital in question caught his fever. Two people living in the same house get typhoid—number two from number one? No; both from the same drain.

Yours faithfully,

October, 1577. A NON-INFECTIONIST.

W.—We know of no book dealing specially with the subject of the adulteration of drugs and their chemical and microscopical analysis. Scoresby-Jackson's Materia Medica, Hanbury's Pharmacographia, and Pereira's Materia Medica contain the fullest and best descriptions of the characters and properties of drugs. Attfield's Pharmaceutical Chemistry may be strongly recommended for the analyses of chemical substances.

ANTISEPTIC INHALATION IN PULMONARY DISEASE.

To the Editor of THE LANCET.

SIR,—Topical treatment by antiseptic inhalation in phthisical and bronchitic affections is no longer a novelty in therapeutics. It is evidently and deservedly coming into recognition as a valuable means of treatment. It is not surprising that the analogy subsisting between the suppurating surface of an incised wound and the inflamed and ulcerating cavity of a diseased lung should have suggested also in the latter the topical employment of antiseptic remedies. The almost complete identity between the condition presented in an ordinary abscess and those in excavation of the lung is a once apparent, and indicates unequivocally the same means of treatment.

In adopting local antiseptic medication, medicine is adding another to the many acknowledgments of the splendid success of Professor Lister's antiseptic modes in the sister domain of surgery. But while the external or surgical employment of antiseptics is comparatively simple and easy, it is very different when we have to introduce our remedies into the interior of the body through a close and jealously guarded portal, as we have in the case of the lungs. The relative accessibility makes all the difference. Various modes have been adopted from time to time to effect direct medication of the pulmonary tissues. The inhalation of the vapour of heated solutions of the various materials has long been the most extensively used. But careful observation of the action and effects of this steaming process has convinced me that in a very large number of cases it is not only inefficient, but in many respects positively injurious. It relaxes the tissues with which it comes in contact, it encourages suppuration where the ulcerative process has begun, and therefore increases expectoration and cough, and consequently the distress and exhaustion of the patient. Besides, the inhalation of hot, moist vapour is so repugnant to the respiratory tract that but a small quantity of the medicated material can penetrate sufficiently into the pulmonary tissue to be of use. The immediately subsequent effects are also not unattended with risk from the exposure of the air-passages to air of a lower temperature after hot inhalation.

While working out the idea of antiseptic inhalation, these considerations nearly a year ago suggested the plan of adopting the principle of the old-fashioned and now nearly obsolete respirator for the purpose. These antiseptic inhalers were first made to my order by a local tradesman of common tin, of the exact size and shape of the ordinary respirator, with a double bottom of perforated metal, and elastic cords to fasten over the ears. The space between the perforated plates is filled with common tow, saturated with the antiseptic solution. The patient is carefully instructed to *inspire* through the mouth alone, and *expire* through the nose. In this way the breath is drawn through the saturated tow in the perforated chamber of the inhaler, and passes into the lungs laden with the antiseptic materials. Expiring only through the nose involves a thorough circulation of the medicated air. The respiration should be short in the beginning, but gradually deepened so as to displace and affect the residual air in the more distant portions of the lungs. Each inhalation should last from fifteen to twenty minutes, and may be with advantage frequently repeated, but especially at bedtime and before getting up in the morning, as at these times the changes of temperature to which the body is exposed, from change of room, clothing, and other conditions, are apt to excite fits of coughing, as is well known.

After many trials of the now formidable list of antiseptics, I came to find that carbolic acid and creasote were in varying proportions the most efficacious and satisfactory. The want of volatility in boracic and salicylic acids proves a bar to their employment in this dry method. Of the two I have selected, carbolic acid has the greater influence in checking the amount and purulent nature of the expectoration; while creasote, modifying the character of the sputa similarly but to a less degree, exerts in addition a marked effect as a sedative on the cough apparently by reducing the irritability of the pulmonary tissues. The following is the formula for the antiseptic solution I usually prescribe:—Spirit of creasote, two drachms; carbolic acid, glycerine, of each half an ounce; distilled water to two ounces. Mix. Ten or twelve drops for inhalation. Whether these substances act by destroying the germs to which the formation of pus is attributed by the great teacher of the antiseptic method, or by their abortive effect from a physical cause on cell proliferation in the seat of morbid action, I do not know; but the effect of this antiseptic inhalation in diminishing the expectoration and with it the cough in the various forms of phthisis, and in bronchitis, especially the purulent form, with bronchial dilatations and fetid expectoration, is certainly most remarkable. To be able with this means to dispense with cough mixtures *et hoc genus omne* is no small advantage where it is so necessary to preserve the digestive processes if possible undisturbed and intact. In the so-called phthisis laryngea, it gives more relief than other topical medication I have yet tried.

I have now for nearly a year employed this treatment by antiseptic inhalation very largely both in private practice and in the Royal National Hospital here. The best proof of its efficacy is perhaps its popularity with the patients of the hospital. Many of them, whose cases do not indicate its use, seem to think themselves badly used beside their more fortunate fellows, and accordingly many requests are made for "that inhaler." The demand has now so far exceeded the local supply of a somewhat primitive article that Messrs. Maw and Sons, of London, have arranged to produce this inhaler in white metal or electro-plate at a moderate price. I am sure the results of this treatment in appropriate cases will be most encouraging. I am, it so happens, able to record a most satisfactory personal experience of this antiseptic inhalation in the profuse suppurative stage of a broncho-pneumonia in February of this present year. I do not lay claim to any great novelty in connexion with this instrument; for Messrs. Maw inform me that the principle is the same as that "suggested by a Liverpool physician many years ago," and revived more recently by Dr. Roberts, of Manchester. My inhaler is, however, they say—for I have not seen the others,—much smaller, and more like the ordinary respirator. It fits more accurately to the mouth, and therefore is more handy, and prevents the too great dilution of the medicated air in its passage from the perforated chamber, through which the whole breath is drawn to the lungs. Yours faithfully,

Ventnor, Oct. 9th, 1877. J. S. COGHILL, M.D., F.R.C.P. Ed.

CREMATION.

On the 9th inst., at the Cemetery of Riolo at Lodi, Prof. Gorini made a new trial of the crematory apparatus invented by himself. There were several distinguished persons present, among them Dr. Bono, who was delegated by the Town Council of Milan; Dr. Nardi, also of Milan; and representatives of the leading Italian papers, professional and lay. The number of army surgeons in attendance was also remarked. The body destined for cremation was that of a man, sixty-two years of age, and weighing forty-two chilogrammes. It was introduced into the apparatus at 1 P.M. At 3 P.M. the fire had done its work, and there remained of the body only 5 per cent. of its original weight. Not the slightest fetor or disagreeable sensation was experienced by the bystanders. This result was obtained with the consumption of 200 chilogrammes of wood. A round of applause saluted Professor Gorini, and, in the name of the company, Dr. Bono congratulated him on having produced the most expeditious and thorough crematory apparatus yet known.

HYDROPHOBIA AND RABIFORM HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—The three cases of hydrophobia reported in THE LANCET of Jan. 20th, 27th, and Feb. 3rd, recall very forcibly to my mind the particulars of a case attended by me in 1873—doubly impressed on my memory, not only by my notes on the peculiarity and gravity of the symptoms, but also by the fact that I received no remuneration for a very anxious and laborious attendance.

Can we have the group of varied symptoms to which we have given the name of hydrophobia, from one prominent feature not always present, without the supposed essential cause—the bite of a rabid animal? From my own experience I must answer in the affirmative, though Surgeon Fleming, in his criticism on the treatment of the Glasgow sufferers, asserts: "Rabies and tetanus cannot be produced by mental disturbance, and the most powerful imagination could never enable a man to simulate the characteristic symptoms of either disease." Unless Mr. Fleming has a reserved meaning for the word "characteristic," his dictum is at variance with the experience of French authorities.

Chomel describ·d three kinds of pseudo-hydrophobia—viz.: 1. Simple horror of liquids. 2. Sympt matic hydrophobia. 3. Rabiform hydrophobia, or spontanous rabies. The first two divisions are well known, and are unimportant.

Valleix recognises Chomel's divisions, and, describing rabiform hydrophobia in his work, "Guide du Médecin Praticien," tome iv., p. 753, says: "Elle a pour causes principales la *peur* sort d'avoir été mordu par un chien enragé ou un hydrophobe, soit d'avoir contracté la rage en communiquant avec un individu affecté de cette maladie..... Enfin, l'hydroph·bie rabiforme peut être causée par une grande *frayeur* qui n'a aucun rapport avec aucune espèce de rage. J'en ai vu un exemple frappant dans le service de M. Louis à la Pitié, chez une jeune fille qui conduisant une charette, avait failli écraser un enfant. Tous les symptômes de la rage se manifestèrent peu de jours après cette emotion vive."

He assigns to it a pe iod of incuba'ion sometimes of hours, sometimes of years, when it cannot be reasonably a tributed to any virus, but to the influence of the imagination. After enumerating the leading characteristics, he says: "Nous avons eu un mot les symptômes propres à la rage." To differentiate between the two diseases, his w rds are: "Le premier élément du diagnostic se trouve évidemment dans l'existence ou l'absence de la cicatrice resultant d'une morsure. S il en existe une, c'est une présomption en faveur de la rage, mais ce n'est pas encore une certitude, car l'animal pouvait être simplement irrité, et non enragé." In the absence of this characteristic, he confesses that the difficulty of diagnosis is great, but that it may be arrived at by attention to the following circumstances:—"L'hydrophobie s est elle declarée au bout de quelques heures ou de peu de jours, on a des présomptions en faveur de l'hydrophobie rabiforme; ne s'est elle declarée qu'au bout d'un très longtemps (plusieurs mois, un an, plusieurs années) on a des motifs de poser les mêmes conclusions. Le délire, la fièvre, l'envie de mordre, appartiennent a l'hydrophobie rabiforme. Enfin, si la maladie dure très longtemps, on doit admettre l existence de cette dernière affection, car la rage se termine par la mort, du troisième ou cinquième jour."

In the face of such an authoritative statement I think it difficult to deny the existence of symptoms analogous to those of pure rabies which a patient either simulates or, in spite of his own free will, imitates.

With these necessary preliminary remarks I give a condensed account of my case.

About 6 P.M., Feb. 10th, 1873, I was called suddenly to see George L——, Green-lane, Halifax, the messenger saying "the man was raving mad." I went at once, and found my patient held down forcibly in bed by three men, and working in violent convulsions. His face was much distorted; his eyes staring and wild; the muscles of the neck contracted; whilst he strove to throw his body into all kinds of positions. These movements continued for about ten minutes, when sudden relaxation of the muscles took place, and he lay back panting for breath, with an anxious, frightened look, bathed in perspiration, and perfectly conscious. His wife told me for the past week he had been restless, ill-tempered, sleepless, and alarmed at the slightest sound. He had also considerable difficulty in swallowing. In Halifax during 1871 and 1872 several cases of hydrophobia had been diagnosed by one practitioner, and, as my patient's symptoms were suspicious, I asked whether he had ever been bitten by any animal. She answered, Never to her knowledge, and certainly not recently. I saw him again after clearing the house of his excited friends, and before and her paroxysm occurred examined him carefully. His breathing was still hurried; pulse quickened; tongue clean; body profusely perspiring; temperature slightly increased; the pupils of normal size. I found no trace of any bite. He told me that he knew what he was doing; but could not resist the impulse of his convulsive gestures, and he begged me to give him some thing to make him sleep. Whilst with him another attack occurred, followed again by reaction. I injected a large dose of morphia, left him in charge of two men, and sent a mixture of hyoscyamus and bromide of potassium. I saw him again at 9 P.M. and again at 11, when, as his condition was unchanged, I gave him another injection.

Feb. 11th.—I saw him at 6 A.M. Had passed a restless night, and slept a very short time; convulsions had returned at intervals. Repeated injection. I also visited him at 12 and 10 P.M.

Without entering into all minute details of my daily visits, I may say he was carefully attended and watched by myself and assistant from the first up to the date of his death, March 11th; that his symptoms varied in intensity and peculiarity; that the difficulty of swallowing increased; that his state of terror continued the same, and consciousness remained up to the very end, death taking place from extreme exhaustion.

My treatment was necessarily directed—1st, to the subduing of excitement by sedatives; 2ndly, to moral measures; 3rdly, supporting the vital powers not only by the mouth, but by injections into the rectum; 4thly, by following out all the directions laid down by the best authorities for the treatment of an hyperæsthetic condition. I learnt from himself that he had never been bitten by any animal to his recollection. I also expressed a desire to have a consultation; but his friends objected.

The animadversions on the treatment of these Glasgow cases will, I hope, be productive of benefit to future sufferers, and lead to a thorough investigation of the nature and proper treatment of this dreadful malady. THE LANCET Commissions have been hitherto useful ones, and I think this question opens out a new field for such work. Criticism is easy after failure; but certainly I am reminded by these reports of the well-known epigram of Martial on the hospital treatment of his time. Dr. Charteris introduces the honoured name of Trousseau to sanction the questionable duty of "boldly trying everything in presence of a malady which constantly terminates in death"; but he unfortunately violated this more important axiom laid down by another Frenchman, Vidal (Traité de Pathologie Externe," tome i., p. 307) "Que le nom de cette maladie ne soit jamais prononcé devant celui qui a été mordu par un chien; que tout ce qui rappelle cette malheureuse circonstance soit éloigné de son esprit."

Romberg (Nervous Diseases, vol. ii., p. 151) says, with grim truth: "The therapeutic measures hitherto adopted have only proved *meditationes mortis*. He gives the advice, when hydrophobia exists, only to conscientiously fulfil the duties commanded by philanthropy; to eschew bodily restraint; to avoid manipulation, as it only excites reflex irritability, especially as regards the rejection of drinking; and to the last moment to offer cheering consolation, and to avoid mentioning the name of the disease."—Yours faithfully,

Halifax, Feb. 3rd, 1877. T. M. DOLAN, L.R.C.P.I.

To the Editor of THE LANCET.

SIR,—Your remarks on hydrophobia in THE LANCET of September 15th have recalled to memory an Indian experience which may be interesting to some of your readers. During my residence at Dinapore, about the year 1861 or 1862, a friend, who resided a short distance in the country, sent me a native servant who, he stated, had been bitten by a rabid dog. The injuries were on the calf of one leg, and deep, but did not bleed much. I put the man under chloroform, carefully excised the bitten parts, and, there being a blacksmith at work about the house, I got a properly-shaped piece of iron heated and cauterised the wounds perfectly. The man was sent home, with instructions as to future treatment, and a request that the other persons injured by the same dog (of whom I heard there were a good many) might be sent either to my house or to the dispensary, where they would be attended to.

Some three months after this I was dining with my friend, and asked him about his servant. The reply was that he continued perfectly well, but that of some seventeen or eighteen persons bitten at the same time not one was then alive. He had done all he could to persuade them to submit to treatment, but, with the usual apathy of natives, all refused. I know that my patient continued well until I left India, about eighteen months after the date of the injury. Yours &c.,

JOHN BALFOUR, L.R.C.S. Ed.,
Inspector-General of Hospitals, H.M. Indian Service (retired).

London, Oct. 1st, 1877.

To the Editor of THE LANCET.

SIR,—The subject of hydrophobia being just now ventilated in your columns, the following case may be worth recording.

A male prisoner, awaiting trial, in an Indian gaol, had been bitten a few days before admission by a mad jackal, which had bitten eighteen persons, it was alleged, besides. The staple of treatment was calomel, my object being to equalise the circulation, and to as rapidly as possible eliminate the poison. The man was soon under the influence of the mineral, as indicated by tenderness of the gums and slight salivation, which rapidly became more profuse, and then he became more composed and tranquil. On the third morning after he had been put under treatment I was much gratified, when paying my usual visit to the hospital, to notice the evident improvement, and was sanguine enough to hope that the poor fellow would recover. He sat up in his bed, perfectly rational and undisturbed (previously the slightest noise had thrown him into a paroxysm of fear and trembling), and enjoyed his hookah. He called for water, and drank without hesitation. Half an hour afterwards he suddenly fell back and died.

Owing to caste prejudices there was no post-mortem examination. It may be mentioned that the patient had threatened the native doctor, to whom he had taken a particular dislike, with a bite, saying that if he bit him, he (the doctor) would also become rabid (the wretched man was aware that he was the victim of hydrophobia). He objected to medical interference generally, and, fortunately, took me for the magistrate!—Yours &c.,

Sutton, Surrey, Oct. 4th, 1877. C. R. FRANCIS, M.B., &c.

To the Editor of THE LANCET.

SIR,—Reading M. Buisson's remedy for hydrophobia, in your issue of Sept. 29th, reminded me of a conversation I had with a gentleman some few weeks since, and, though not able to give it in his technical language, thought the case might be of some interest.

He stated that one of his children had been bitten by a dog. He immediately took a cab, and conveyed the child to the Turkish baths situated near London-bridge. After the child had been in the bath some little time, and was perspiring freely, all round the wound on the surface of the skin was a secretion which he believed to be the poison thoroughly eliminated from the system, for no bad results followed. The manager or attendant, and all in the bath at the time, were called to look at the wound, and what appeared to be the poison all round; so, although I know not his name, the case could be easily verified, as I understood him to say he was a frequent attendant there, and no doubt well known. He also said he had left distinct orders at home, should one of the family be bitten in his absence, to at once convey it to the nearest Turkish Bath, and he would be responsible for its life.

Surely if such a simple remedy might be a cure for this fearful malady, it should at once be investigated and made known.—Yours faithfully,

Oct. 3rd, 1877. AN ADVERTISER IN THE LANCET.

'COUNTER PRESCRIBING.

MR. T. F. ABRAHAM, President of the Chemists' Association at Liverpool, in his inaugural address last week, after criticising several parts of the Pharmacy Act, referred to the question of counter-prescribing. He thought that chemists would act wisely not to go beyond their province, and to refrain from prescribing in cases that should be dealt with by those only whose education had qualified them for the duty of indicating the proper remedies for disease.

A Student of Medicine, assistant to a qualified practitioner, was called to see the patient of another medical man, in consequence of the delay in his arrival, and the urgency of the case. Learning that another practitioner had been sent for, he declined to take the case out of his hands, but prescribed and even supplied medicine pending his arrival. About an hour after our correspondent's visit the assistant of the practitioner first sent for arrived, and on being told of what had happened, and of the wish of our correspondent to have his visit and medicine regarded as given in behalf of his principal, he replied that "his principal would not accept any attendance at his hands"—the hands of our correspondent. The assistant who spoke these words did not know whether our correspondent was qualified or not. We do not see that this makes any difference. An unqualified assistant may be courteous. He certainly ought to be so. When he is both courteous and kind, it is a pity that his offers should not be received in the spirit in which they are given. Of course we are speaking on an *ex-parte* statement; but according to this, our correspondent's behaviour seems to have been perfect.

D. M. R.—To enumerate the instruments which should be contained in a complete case of eye instruments would not be easy. Some surgeons can perform all ophthalmic operations with less than a dozen tools, while others require at least fifty. Several manufacturers fit up special cases of eye instruments; but where there are so many good makers, we would rather not say "who is the best."

R. S.—The Secretary of the Plymouth Day Nursery is Miss Amy Pridesux, 5, West Hoe-terrace, Plymouth.

J. H. W. should consult a physician.

COMMUNICATIONS, LETTERS, &c., have been received from — Sir J. Fayrer, London; Dr. Barney Yeo, London; Dr. Sedgwick Saunders, London; Dr. Howard, Paris; Mr. Storr, London; Mr. Foveaux; Mr. Bramwell, Newcastle-on-Tyne; Mrs. Mann, Bucharest; Mr. J. Allen, jun., London; Mr. Francis, Sutton; Mrs. Travers, Kensington; Mr. Cunningham, London; Mr. Wright, London; Mr. Philpots, Peckham-rye; Mr. Fisher, London; Messrs. Tibbits and Sons, Chester; Mr. Ashby, Horsforth; Mr. M. Gaisford, London; Mr. Meclus, Orkney; Dr. Eddison, Leeds; Dr. Hamilton, London; Dr. Alexander, Glasgow; Mr. Lowe, Lincoln; Dr. Russell, Lancaster; Mr. Powell, Bromyard; Mr. Dolan, Halifax; Mr. Gould, London; Dr. Luce, Stratford-on-Avon; Messrs. Guthrie and Co., London; Dr. Aikman, Guernsey; Mr. Thomas, Birmingham; Mr. Gorham, Tunbridge; Dr. Philipson, Newcastle-on-Tyne; Mr. Pike, Gloucester; Dr. Thornley, Newry; Mr. Camden, Rhyl; Mr. Heyworth, Bacup; Mr. Hardwicke, Bamborough; Mr. Ingpen, London; Dr. Moore; Messrs. Corbyn and Co.; Mr. Cooper; Mr. W. Field; Mr. Greenwood; Mr. Cowell; Dr. Foss, Stockton-on-Tees; Dr. Gillespie; Mr. Cripps, Cirencester; Dr. Burder, Bristol; Dr. M'Beath, Sheffield; Mr. Nicholson, Manchester; Mr. Murray; Mr. Burbidge; Mr. Price; Mr. Kershaw; Mr. J. W. Clark, Cambridge; Dr. Tayler; Dr. Thompson, Leamington; Dr. Muscroft, Pontefract; Mr. Lucas; Dr. Fraser, Clitheroe; Mr. Gant, Hastings; Mr. Garraway; Mr. Bellingham; Mr. Brown, Birmingham; Dr. Denny; Dr. Fowler; Dr. Page, Newcastle-on-Tyne; Dr. Wadham; Mr. Lacy; Dr. White, Darton; Dr. Scott, Southampton; Dr. Buchanan, Glasgow; The Secretary of University College; C. H., Clapham; J. H. W.; A Student of Medicine; E. S.; A Surgeon; A Country Student; D. M. R.; S. R. W.; An Assistant-Physician to a Hospital for Children; En Route; A Non-infectionist; A Student; In Medio; W.; M.B., Sheffield; H. B. B.; E. P. E.; M.B., C.M., Edinburgh; M.D.; Medicus; Constant Reader; J. F.; A. B. C.; Constant Reader; Subscriber; X.; Country Subscriber; B. B., Leeds; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Underhill, Tipton; Mr. Walford, Ramsgate; Messrs. Oliver and Boyd, Edinburgh; Mr. Verity, Earlsheaton; Mr. MacCormack, Swaffham; Mr. Rogers, Newport, West Indies; Mr. Hinde, Wolverhampton; Mr. Fowler, Wakefield; Mr. Sleete, Liverpool; Mr. Jones, Conway; Mrs. Pyle, Amesbury; Mr. Terry, Selston; Mr. Stilliard, Birmingham; Mr. M'Callum, Ayr; Mr. Hyde, Chelsea; Mr. Ramsay; Dr. Greenslade, Uttoxeter; Dr. Brown; Dr. M'Donald, Barra; Mrs. Clayton; Mr. Blanch; Mr. Tomlinson, Maldon; Mr. Dennies; Dr. Foote, Rotherham; Mr. Neale, Worksop; Dr. Glascott; Dr. Looker, Altrincham; Mr. Horner; Dr. Little, Liverpool; Mr. Butler; Mr. Anderson; Mr. Willmore; Dr. Smith; Mr. Ellis, Scarborough; Mr. May; Mr. Kemm, Corsham; Medicus, Plymouth; E. R. W., Cwm Avon; Medicus, Dublin; N. B., R. G. D.; R. V.; A. H., Millwall; W. C. S.; Leonardo; Medicus, Hackney; Scapula; L.R.C.P.; P. F.; J. D., Bath; J. T., Great Marlow; D., Bridlington; J. F. C.; A. D. L.

Home Chronicler, East Anglian Daily Times, Bath Herald, Birmingham Daily Gazette, Macclesfield Courier and Herald, Lincolnshire Chronicle, South London Press, Barnsley Chronicle, Hornet, Bristol Evening News, Hexham Courant, Western Morning News, Temperance Record, and *Sussex Daily News* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, OCT. 18TH, 1877.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Oct. 12	29·95	W.	47	50	81	58	44	...	Fine
,, 13	29·86	W.	54	57	...	64	47	0·10	Overcast
,, 14	29·82	S.W.	57	63	99	71	45	...	Fine
,, 15	29·67	S.W.	51	55	84	58	52	0·05	Overcast
,, 16	30·09	W.	44	48	77	53	44	...	Fine
,, 17	30·41	W.	38	41	82	54	34	...	Fine
,, 18	30·39	W.	34	35	...	...	32	...	Foggy

Medical Diary for the ensuing Week.

Monday, Oct. 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. J. Knowsley Thornton: "Removal of Fibroid Uterus and both Ovaries."—Dr. C. Theodore Williams, "On a Case of Persistent Pyrexia, during Phthisis, reduced by Diet."—Dr. B. J. Lee, "On Maternal Impressions."

Tuesday, Oct. 23.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Wm M. Ord, "On the Œdema (Myxœdema) observed in the so-called Cretinoid Condition of Women."

Wednesday, Oct. 24.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
HUNTERIAN SOCIETY.—8 P.M. Dr. Moxon, "On some points in the Clinical History of Heart Disease."

Thursday, Oct. 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Oct. 26.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Dr. James Edmunds, "On the Immersion Paraboloid."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Dr. Henry Thompson, "On a Case of Hysteria, with Contraction of the Lower Limbs, Anæsthesia, and Ischæmia, in a Boy."—Mr. Lawson (for Dr. Aikman), "On a Case of Injury to the lower portion of the Spinal Cord, followed by Wasting and Contraction of the Muscles of the Lower Extremities."—Mr. Bellamy, "On a Case of unusually large Urethral Calculus."—Dr. Dowse, "On a Case of Cerebro-spinal Lateral Sclerosis."

Saturday, Oct. 27.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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